Exhibit 5

CONFIDENTIAL

EXPERT REPORT

In the Matters of *Wachtel v. Health Net*
And *McCoy v. Health Net*

BY

BERNARD R. SISKIN, Ph.D.
Director and Head of the Labor Practice Unit
LECG, Philadelphia Office

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CONFIDENTIAL

EXPERT WITNESS REPORT OF BERNARD R. SISKIN, PH.D.,
ON BEHALF OF PLAINTIFFS ZEV AND LINDA WACHTEL
AND RENEE MCCOY

I. INTRODUCTION

I have been retained as an expert witness on behalf of plaintiffs Zev and Linda Wachtel and Renee McCoy ("Plaintiffs"). I will provide an analysis of the Prevailing Healthcare Charge System data and databases (hereinafter "PHCS Database") used by Health Net to determine usual customary and reasonable ("UCR") amounts for reimbursement of medical providers' charges. Using a methodology that is considered reliable and generally accepted for statistical analysis, it is my opinion that the PHCS Database suffers from fundamental flaws that make it invalid for calculating UCR amounts.

II. EDUCATION AND PROFESSIONAL QUALIFICATIONS

I am a Director of LECG and work in the Philadelphia, Pennsylvania office. I received my Ph.D. in Statistics with a minor in Econometrics from the Wharton School of the University of Pennsylvania in 1970. Upon graduation, I became an assistant professor at Temple University in Philadelphia, Pennsylvania where I served as Chairman of the Department of Statistics for five years. I remained at Temple until 1984, when I resigned my tenured professorship position.

Since receiving my Ph.D., I have specialized in the application of statistics in a forensic setting. Much of my professional experience over the past thirty years has involved analyzing data and evaluating whether data are appropriate and sufficient for inferential analysis. I have written on the proper use, reliability and validity of databases (also known as data sets) for particular applications and have lectured widely on these topics. I have been retained by several courts, governmental agencies, states and private organizations to evaluate and assess a wide variety of databases. These institutions include: the Third Circuit Task Force on Equal

Treatment in the Courts, the National Aeronautics and Space Agency (NASA), the United States Justice Department, the Central Intelligence Agency, the Federal Bureau of Investigation, the Environmental Protection Agency, various states such as New Jersey, California, Connecticut, and Alaska, and numerous municipalities such as New York, Chicago, Philadelphia and Akron, along with numerous private corporations such as Automatic Data Processing, Amerihealth, McKesson, Lafarge, Merck, Rohm & Haas and Washington Mutual.

III. FEDERAL COURT CERTIFICATION AS AN EXPERT

I have testified in more than 100 cases on the issue of the application and use of statistical evidence.[1] The analyses I have conducted have involved allegations regarding the presence or absence of statistical reliability in data sets.

I have also been appointed by courts as a neutral, jointly-agreed-upon expert to undertake specific statistical analysis. My curriculum vita is annexed as Attachment 1.

IV. EXPERTISE

I am an expert in statistics: the science of collecting, classifying, presenting and interpreting numerical data; the analysis of data and the limitations of what can and cannot be properly inferred from data.

V. INFORMATION CONSIDERED IN FORMING MY OPINIONS

In forming my opinions, I have reviewed the following documents:

- The PHCS Subscriber Reference Manual (H000762-939);
- PHCS Rules and Requirements for Purchasing 1998 Outputs (H001724-1771);
- Various HIAA/PHCS Committee Minutes (*e.g.*, H002095-101; H001339-42; H001359-64; H001309-10);

[1] I am being compensated at a rate of $475 per hour for this report and my testimony.

- Correspondence between PHCS and Bridgestone-Firestone and Data Contributors (*e.g.*, H001640-41; H001779-80; H001675; H001829-33; H001299; H001694-5; H001834-35);
- HIAA/PHCS reports and memos (*e.g.* H001688; H001837-38; H001419-23; H000611-16; H000358-69; H000466; H000462-69; H001707-08; H001413-17; H001344-47; H002145; H000689-91; H001715-17;
- CPT code reference materials;
- Various Ingenix Fee Analyzer materials; and
- The deposition testimony and exhibits of Thomas Musco and Sandy Herman and portions of other deposition testimony and exhibits.

VI. DISCUSSION

A. Overview

The following details my opinion regarding the methodology and use of the PHCS Database.

The February 1999 Health Net EOC defines UCR in relevant part as: "the amount PHS determines to be the reasonable charge for a particular service in the geographical area in which it is performed based upon a percentage of a modified nation-wide database used for reimbursement to physicians, providers and hospitals." The essence of the definition includes the following core concepts: "reasonable charge for a particular service," and the "geographical area" (where the service was performed).

If Health Net is to determine UCR based on this definition, it must have a database that satisfies the core concepts.[2] To assess a reasonable charge for a particular medical service, one

[2] In addition to the February 1999 Health Net Evidence of Coverage ("EOC"), which I understand is the most common EOC currently used by Health Net, I have also examined the

must rely on actual charges billed by similar providers for reasonably similar services in a relevant geographic area. In order to determine the set of reasonably similar services, the database would need to contain information on those factors which one would expect to affect the cost of the services, such as: (i) significant differences in provider qualifications, (ii) significant differences in type of medical service provided, and (iii) significant differences in medical market area. Given this information, one could then determine which charges are reasonable and which are "too high." A review of the PHCS Database shows that it does not (and cannot) satisfy the core concepts of reasonably similar provider qualifications, medical services rendered and medical market area in which the service is performed. In sum, the PHCS Database does not allow one to compute a distribution of charges which are sufficiently similar that one can reasonably assess which charges are "too high."

B. Methodology Review

In evaluating the PHCS Database, I considered the following general principles:

1. the stated purpose for the data (*e.g.* any relevant or other definition);
2. the data collected and the manner of their collection;
3. the data not collected and the reasons therefore;
4. the steps taken to ensure the accuracy, comprehensiveness and completeness of the data collected;
5. the editing of the data, if any, and whether such editing impacted the resulting distribution of the data and its validity;

UCR definitions in the other EOCs provided to beneficiaries such as Zev Wachtel and Renee McCoy. While these definitions differ somewhat, they all contain the same core UCR concepts requiring "reasonable" rates applicable to similar "geographical" areas. Thus, my analysis with respect to proper statistical means for determining UCR applies equally to all of Health Net's EOCs and UCR definitions.

6. the end use for the data, and whether the data necessary for such end use have been collected; and

7. whether any biases (distortions) were introduced at any point in the methodology.

C. The PHCS Database

Set forth in Appendix A hereto is a description of the PHCS Database, including its contents, how it collects data, and the edits it performs. The appendix discussion includes an analysis of the fundamental flaws that render the PHCS Database invalid for determining UCR.

D. The Statistical Model

1. ***Concept of Similarly Situated or a Distribution of Like Charges***

In choosing to pay less than a provider's billed charge, Health Net uses the PHCS Database to assess the reasonableness of a particular charge for a medical service. PHCS's stated purpose is to determine the distribution of charges in an area, so one can determine if a submitted charge is within the norm for that distribution. Hence, the distribution must be appropriately defined so that, *a priori,* the charges would be expected to be similar (differences would not normally be predicted) and differences in charges would be considered random. For example, if one were comparing the price of a Cadillac and a Ford, one would not be surprised to see the Ford cost less than the Cadillac, and one would not conclude that the cost of the Cadillac was "too high." But, if one were looking at Cadillacs which were similar with regard to year, make, condition, mileage and features, one would expect the two cars to be priced reasonably similarly, absent any other obvious differences. Then, looking at the highest priced Cadillac, one could reasonably consider it to be priced "too high."

This general sort of problem (*i.e.*, is a good or service appropriately priced or "too high?") is faced frequently by individuals and companies (*e.g.*, is the price asked for a certain

used car reasonable? is the fee asked by a speaker reasonable? are the salaries paid to female employees reasonable compared to the salaries paid to male employees?). From a statistical perspective, finding the answer to this question requires two things: (i) relevant data comparing like to like, and (ii) a value judgment of what is "too high."

The statistical data needed is the distribution of prices for similar items in the relevant market area. Thus, to assess the appropriateness of the price of a car, one must determine the prices of similar cars. To assess the appropriateness of a speaker's fee, one must determine the fee for speeches by comparable speeches. To assess the appropriateness of the salaries of female employees, one must determine the salaries of similarly situated male employees. Obviously, the key is to have data regarding the prices of "similarly situated" items or events, so the prices can be compared and the relative position of each of the prices within the distribution can be determined. Determining and obtaining a population of "similarly situated items" is the key statistical issue.

If one is trying to assess the reasonableness of a price for a car, what data would one need? Clearly, one would need data which consider (or allow one to consider) all the obvious major factors which would be reasonably expected to affect the price of the car. If one were pricing a 2000 Ford Taurus, what information what would one want to know? Optimally, one would want to know the distribution of prices of all 2000 Ford Tauruses in the market area which have the same options, mileage and condition as the Ford Taurus in which one is interested. Of course such perfect matches may not exist. Therefore, one would try to look at data on options, mileage and condition for all 2000 Ford Tauruses in the same market area.[3]

[3] This could be done by defining ranges of mileage and conditions and options which are similar or by capturing data on actual mileage conditions and options for each car and statistically

Thus, one would know the distribution of prices for cars which one would reasonably expect to be similar and one could then judge whether the price asked is "too high." This, of course, in essence, is the service provided by the commonly used "Kelly Blue Book."

Now, let us consider the case of determining the appropriateness of the cost of a speaker. What data would you need to know to make such a determination? It would depend on the speaker whom you are considering engaging (*i.e.*, which speakers are considered to be fungible?). Clearly, the fee to engage President Clinton is not comparable with my lecture fee. One could not reasonably assess whether President Clinton's fee is "too high" by comparing it with my fee or the fees of persons similar to me. One would need to define the population of speakers who would be considered to be in the same demand as President Clinton (*e.g.*, all former heads of state).

Lastly, let us consider how we would determine whether the salaries paid to female employees are reasonable. The issue of gender discrimination with regard to salary has been widely discussed and debated in the statistical and legal literature as well as by the Courts. Here, the issue is how disparate the salaries must be for one to infer that illegal discrimination has occurred. Courts have traditionally looked at distributions of outcomes for similarly situated employees and have drawn adverse inferences if a value is "too high" (or "too low") based on where it falls within the distribution of outcomes. *(See Castaneda v. Partida*, 430 U.S. 482 (1977); *Hazelwood School District v. United States*, 433 U.S. 299, 311-17 (1977).) The issue of what constitutes "similarly situated outcomes" has been widely discussed by the Courts in *Bazemore v. Friday*, 478 U.S. 385 (1986); *Palmer v. Schultz*, 815 F., 2d 84 (D.C. Cir.1987); *Sobel v. Yeshiva*, 839 F. 2d 18 (2nd Cir. 1988) and *Catlett v. Missouri Highway*, 828 F. 2d 1260

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adjusting all cars to be the same through a technique such as regression analysis.

(8th Cir. 1987).

In sum, the consensus in the statistical and legal literature is that one need not define similarly situated with scientific certainty, but one must consider those factors which one would reasonably expect to affect the outcome and the results of one's analysis.

2. ***Applied to UCR***

In assessing medical charges, it is obviously necessary to compare charges that are similarly situated with respect to the key factors which would be reasonably expected to significantly affect the price for such medical service. Such data are necessary to determine if a charge is reasonable (*i.e.*, within the range of "expected" charges) or "too high" (*i.e.*, above what one would usually or reasonably expect to see for a particular service described by a particular CPT code).[4]

Determining the definition of "similarly situated" requires consideration of key factors that bear on the price for a medical procedures, (*e.g.*, CPT code), such as: (i) provider qualifications (including licensure, training, experience, credentials, familiarity with the procedure); (ii) the location of the procedure (comprehensive care facility, hospital, nursing home, office, etc.); (iii) the difficulty or other detail of the procedure (*e.g.*, as designated by a modifier add-on to the CPT code); and (iv) the medical market for the particular procedure (*e.g.* the cost for a surgery in New York City may be different from the cost for such surgery in Trenton).

E. The PHCS Database Is Insufficient To Assess Reasonable Charges

One of the fundamental flaws in the PHCS Database is its failure to collect and

[4] Codes for medical, surgical, dental, anesthesia, medical devices, certain drugs, and other healthcare procedures are referred to collectively herein as "CPT Codes").

incorporate medically relevant factors (as discussed above) which would be expected to affect prices. None of this information is found in the data upon which the PHCS Database is based. For no discernable reason other than convenience (and possibly cost), PHCS chose not to collect the key information necessary to ensure that similarly situated charges could be compared. Thus, they have no way of determining which charges are "too high."

Consider the following example. Assume two different distributions of surgeons. The first distribution is composed of fairly inexperienced general orthopedic surgeons on staff in small suburban hospitals and the second distribution is composed of specialized orthopedic knee surgeons with years of experience at metropolitan specialty hospitals. One would expect and accept that the seasoned specialists would charge more for their services than the novices. Assume further that the charges involve a CPT code for a type of knee surgery, with the seasoned specialists handling more complicated versions, which take greater skill and more time (noted by a modifier added to the CPT code). One would anticipate that the distribution for the seasoned specialists would contain higher charges than for the suburban novices.

The PHCS Database categorizes all charges with the same CPT code in the same zip code area as being the same service in the same medical market area and, hence, one should expect the price to be similar regardless of provider, place of service or special circumstances. The PHCS Database considers a service involving complications that has been rendered by a board certified surgeon at a major medical hospital as similar (and hence, price comparable) to a service, without complications, rendered by a physician at his office, as long as the office and hospital are in the same combination zip code area and the service has the same CPT code, ignoring modifiers.

As shown by this illustration, the PHCS Database cannot possibly be sufficient to

determine whether or not a charge is reasonable and customary since it, among other things : (i) fails to consider the provider's qualifications; (ii) fails to consider the place of service; (iii) fails to consider the difficulty (or any other detail) of a procedure aside from its broad categorization (*e.g.* CPT code) and (iv) fails to account in any meaningful way for differences in medical market areas and any concomitant impact on prices. The basic premise that all services rendered with the same CPT code constitute the same service and, hence, are price comparable regardless of provider or the difficulty of the procedure is fundamentally flawed, making the use of the PHCS Database to establish UCR unreasonable.

The PHCS Database is not only invalid because it fails to capture the necessary data to determine UCR; it is also flawed in the way the PHCS collects and processes data because: (i) the data that PHCS collects are not based on any scientific or judgment based sampling, but upon a convenience sample that is not tested to determine whether the data are valid, representative, or fair (*i.e.*, Sampling Flaws); and (ii) valid data are deleted from the collected data in the statistical editing process, without reliance on any medical judgment, which causes the results to be biased (*i.e.*, Editing Flaws).

If two unlike distributions of similarly situated charges are combined, the methodological flaw of combining like and unlike charges in establishing UCR for a "particular" service results in all those in the higher price distribution who are affected by a UCR calculation receiving less than they should. In every case, combining unlike charges to establish UCR causes those persons from the higher distribution for that "particular" service to receive less than they should.

F. Sampling Flaws

There are two preferred methods by which samples may be collected for the purpose of statistical analyses: (i) the sample can be a scientific sample, which is essentially a random sample of an entire population, within which each population element has a known, nonzero chance of being included; or (ii) the sample can be a judgment sample, which is a non-probability based sample that is often called a purposive sample, in which the sample elements are handpicked because they are expected to represent a relevant population and serve a specific research purpose. Because the latter type of sample relies on personal judgment in the element selection process, it prohibits estimating the reliability of the sample results.

However, in this case, the sampling methodology used to collect the data from which the PHCS Database is based was neither of the two preferred methods. Here, the sample consists of whatever information those insurers that happened to be Data Contributors happened to contribute and which happened to have survived the editing processes PHCS employed. This sampling methodology was neither a proper enumeration of a population nor a valid scientific sample. It was also not a judgment sample because the elements of the data collected were not deliberately selected to represent a relevant population and serve a specific research purpose. Instead, the PHCS Database is based upon data collected from a sampling method known as convenience sampling. A convenience sample is a non-probability sample that is often referred to as an accidental sample, because the data included in the sample enter as if by accident. In convenience sampling, the selection of units is based on easy availability and accessibility. The sample is chosen on the basis of expediency, cost, efficiency or other reasons not directly concerned with scientific sampling parameters. Although obtaining this sort of sample is much

easier, the trade-off is the representativeness of the sample. Therefore, the major disadvantage of this technique is that one cannot assure the representativeness of the information collected *vis a vis* the population as a whole. In such a case, it is incumbent upon the data collector to externally test and validate the sample to ensure that the sample is representative of the population.

Here, there is no evidence that the information collected from the convenience sample is representative of the population as a whole (*i.e.*, representative of the underlying charges required to determine that a billed charge exceeds a reasonable charge).

The fact that a database is large in size does not make it representative of the population or a valid usable sample. A small, well-designed sample yields valid and highly reliable information while an extremely large convenience sample may simply produce large amounts of meaningless, biased and misleading data. Large numbers do not ensure accuracy or comprehensiveness.

Consider the following simple illustration in which one is interested in predicting an election result. One could create a scientific sample by randomly selecting 1,300 people from the entire population of New Jersey. Alternatively, one could create a judgment sample by sampling purposefully from a reasonable cross-section representative of New Jersey's voting population (*e.g.*, draw a judgment sample based on respondent age, sex, race, religion, location and income). Both such sampling methodologies would generate reasonable results. However, another alternative would be to obtain a sample by advertising a toll-free number in a variety of newspapers across the state and asking people to call in and participate in a poll. The resulting sample may be quite large, but it would be unlikely to be representative of the voting population and would be unlikely to yield a valid or reliable answer.

A historical example demonstrates this point. In 1936, the Literary Digest ran a poll from which it predicted that Alf Landon would win the presidential election in an electoral college landslide, based on the more than two million responses it collected. The poll was performed by sending postcards to people with telephones, magazine subscribers, car owners, and a few people on lists of registered voters. Of course, Franklin Roosevelt actually won the election. However, the sampling here was neither a scientific nor judgment sample, but a convenience sample (*i.e.*, those people who happened to have received and returned the postcards). A key problem was that the sample was biased toward Republican-leaning voters, who could afford magazine subscriptions and telephones during the Great Depression. This was compounded by the likelihood that those who responded to the poll were those who most wanted a change in the presidency. The poll, although premised on large numbers, failed because it was based on a convenience sample.[5]

In summary, the old adage of "garbage in, garbage out" accurately summarizes the result of the PHCS Database being derived from convenience sampling.

Given that the PHCS Database collected data via convenience sampling, it was PHCS's responsibility to test the representativeness of the data received to assure that the data it collected -- and the means of its collection -- were reliable and non-biased. This would entail: (i) comparing the Data Contributors (as responding insurers) to the population of insurers and ensuring that they are representative of the population of all insurers, and (ii) comparing the sample data sent by Data Contributors (as respondent insurers) with the population of all data maintained by them to ensure that the sample data are representative of the entire data

[5] The law of large numbers is based on scientific samples and does not hold if the sample is biased or unrepresentative of the relevant population.

population. PHCS did neither.

Another fundamental flaw in the PHCS sample is that the basic unit of measurement is incorrect. Provider-specific information is not being collected, patient-specific information is not being collected and procedure-specific or place-specific information is not being collected. Thus, specific provider charges are not studied. By way of simple example, consider the following hypothetical: five providers in a particular locality submit charges of $60, $70, $80, $90 and $100, respectively, for a specific procedure. On a provider basis, $80 is the 80th percentile. PHCS, however, determines UCR based on charges. Suppose that there are 100 charges from the $60 provider, 60 charges from the $70 provider, 20 charges from the $80 provider, 15 from the $90 provider and 5 from the $100 provider. Based on these charges, the 80th percentile would be $70, not $80.[6] That is, the result would appear to indicate that UCR is $70, but the determination of the UCR is premised on the total number of charges collected, not the usual charges of specific providers for specific procedures.

G. Editing Flaws

It is proper to check data submitted for data entry inaccuracies. Most databases will contain data which are in error due to reporting, input or processing errors. Since the distribution of data is of primary importance and an incorrect high value can skew the results, it is not only proper but necessary to check the data. However, such checks must be performed carefully; although data which are incorrectly high should be removed so as not to skew the data upwards, data which properly reflect "high" values should not automatically be removed, or the data will

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[6] This is especially problematic with the PHCS Database because the quality and complexity of service is correlated with provider, price is correlated with quality of service and the occurrence of charges is negatively correlated with complexity and/or quality of service and/or price.

be incorrectly skewed downward.

Proper editing of the data can be done in two ways, both of which require medical or factual knowledge, not rote, formulaic rules to remove "statistical outliers." Rules may be established based on knowledge of prices in the marketplace and certain values can be classified as impossible and, thus, as reflecting erroneous data points. For example, a charge for a routine office visit of less than $1 or more than $1,000 is clearly a data entry error; since judgment tells us that no doctor charges that little or that much for a routine office visit. Therefore, rules for identifying obviously invalid value can established based on judgment. The more difficult problem occurs when the values seems unusual or atypical of the bulk of the observations, but cannot be automatically considered to be impossible. Such values can be identified statistically as outliers. For example, one could look at fire losses for apartment buildings and find that 99.9 percent of the losses are less than a million dollars, but a few show up in the 100 million dollar range. These are "outlier values" which can be identified by statistical methodologies. However, without examination or judgment, we cannot tell whether these extreme values are accurate and simply place very high in the distribution (*i.e.* total losses of very large and expensive apartment buildings are a rare event) or whether they are input or keypunch errors. Automatically deleting statistical outliers will very likely discard some valid high charges and, hence, will skew the distribution of charges downward.[7]

PHCS's methodology again appears to be one of convenience rather than correctness. The PHCS data edits appear to be primarily statistical in nature, automatically eliminating all outliers without any justification or evidence that they represent data errors rather than simply

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[7] Automatically deleting high and low values will not affect the distribution if, and only if, the same proportion of values above 80 percent and below 80 percent are deleted.

high or low true values. This approach is extremely troublesome since the distributions are initially based on unlike data ("apples and oranges"). Thus, the high charge resulting from the most qualified surgeon performing in the most difficult circumstances at the most sophisticated medical facility may appear as a statistical outlier when compared to all charges for procedures in the same CPT code without regard to the identity of the provider, procedure difficulty or location of service.

The procedures PHCS used to eliminate collected data from its samples are also invalid. For example, the mean to median test that PHCS utilizes (all data are eliminated if the mean to median ratio is above 2.5 for surgical CPT codes and 1.5 for medical CPT codes) is exactly the type of formulaic rule that produces biased results. The median equals the mean in a perfectly symmetrical distribution. The more that data are skewed to the right (*i.e.*, there are disproportionately large values), the greater the ratio of the mean to the median. The existence of very high values may be an accurate reflection that there are different difficulties of service, different qualities or types of providers and different locations of service within the same CPT code. To delete these data eliminates genuine differences and improperly skews the resulting data downwards.

Assume 500 charges submitted by a Data Contributor for CPT code 99202 (an office visit for a new patient): 200 at $10, 100 at $30 and 200 at $100. It could well be that the 200 $100 charges reflect difficult or lengthy office visits (*e.g.* an office visit for a patient just diagnosed with cancer) while the $10 charges were for simple or brief office visits. Or, it could be that the $100 charges were physician charges while the $10 charges were physician assistant charges. It is possible that the 200 charges at $100 are data errors, but it is also possible that they represent valid charges. PHCS does not check further; rather, it simply deletes all 500 data points. The

data collected may "fail" the mean to median test, notwithstanding that all the data are valid and accurate. Deleting the data would be incorrect and would bias the resulting distribution downwards. To automatically assume that data are erroneous and should be removed based on such a rule is inappropriate.

Another historical example demonstrating this point is a case in which the United States Department of Agriculture based certain subsidies on a community's mean income. One West Virginia community that had long qualified for the subsidy found itself no longer eligible. What had happened? Jay Rockefeller had moved into town. The mean was pulled correctly upward, above the subsidy-eligible level. Mr. Rockefeller's single high income skewed the mean of the entire community. However, the solution was not to ignore valid, relevant data. The solution was not to exclude Mr. Rockefeller's income because it was high. The solution was to make the standard more meaningful. Similarly, PHCS's exclusion of data that fails the mean/median ratio edit assumes that data is erroneous merely because they are high and excludes them even though they are valid, rather than determining a meaningful standard that includes valid, relevant data.

Similarly, the "high/low" screen edits the PHCS utilizes are invalid. Such screens appear to be statistically-based rather than judgment-based. The PHCS does no factual checking to determine whether such data are valid or invalid. Nor does PHCS exercise medical judgment by relying on medical professionals knowledgeable about a medical market area. A proper procedure would require an informed decision to determine if each such "extreme" value is legitimate or in error. The automatic deletion of true extreme values which should be retained can create a significant bias in the distribution of charges.

Moreover, one would expect medical charge distributions to be right-tailed extreme, with valid extremes on the high end representing various permutations of highly specialized or super-

credentialed physicians or highly complex surgery. This is especially true when charges are grouped or determined to be similarly situated based solely on medical codes without modifiers or other information. Therefore, high values are much more likely to be deemed statistical outliers. Automatically discarding the statistical outlier data underestimates the valid high charges [disproportionate (yet valid) high values shift the distribution to the left] and underestimates the percentiles above the median.

Making matters worse is the fact the PHCS did sequential outlier screenings. That is, the first screen eliminates by CPT all records an insurer submits due to so-called "extreme" values.[8] Each removal of such extreme information serves to redefine the distribution and change the parameters of what constitutes the "extreme." By analogy, assume a distribution of all car prices, regardless of type. Ferraris are initially the extreme. By removing Ferraris, Mercedes become the new extreme. If you then remove the Mercedes, Cadillac may become the extreme, and so forth. Pushed to the ridiculous, Kias could become upper-end outliers.

H. Medical Market Errors

Another fundamental flaw in the PHCS Database is the failure to properly determine medical market areas, which would represent economically similar geographic areas. Three-digit geozips are used to define the provider's "geographic area" for purposes of the PHCS Database. But true medical markets vary and cannot rely solely on postal zip codes (which have to do with postal requirements such as proximity to transportation and nothing to do with medical markets). For example, consumers (particularly those with serious medical conditions) are typically willing to travel to obtain needed care from a specialist. Thus, it is reasonable to assume that most

[8] As previously noted, insurers must resubmit data when they fail to meet their minimum or 75% acceptability rating in order to obtain the PHCS Database. Thus, the practice entices insurers to eliminate extreme values when submitting data, regardless of validity of the charge.

consumers would be willing to travel a far greater distance for a quadruple by-pass operation than for a blood test.

Medical markets vary *inter alia* by specialty, quality of doctor, procedure and complexity. However, none of this information is found in the PHCS Database. In addition, under PHCS's geozip groupings, critical distinctions relating to valid medical markets and meaningful "geographical areas" are lost.

Once again, PHCS uses a convenience approach. Instead of collecting the key information to ensure that likes are being compared with likes, PHCS initially collects the 3 digit zip code and then groups together several 3-digit zip codes with no assessment of whether the resulting hundreds of zip code areas comprise a valid medical market.

Collecting only a three-digit geozip does not create the appropriate medical markets for the appropriate CPT codes. In some circumstances, the geographical area it creates is too limited. In others, it is too broad.

VII. Conclusions

Based on my analysis of the PHCS Database, using the statistical methods and assumptions described above, I reach the following conclusions:

A. although PHCS's design may have initially been the result of its creation and design for non-reimbursement purposes, PHCS's operators' recognition of the need to have expanded data, when it became obvious that it was used for reimbursement purposes suggests that they were aware of the basic inadequacy of the data they compiled in the PHCS Database for determining UCR;

B. the PHCS Database failed to take into account obvious factors that influence medical costs, which renders PHCS incapable of assessing reasonable medical costs and

validly determining UCR;

C. the PHCS Database is based on a convenience sample, which lacks the basic quality control to ensure the legitimacy or completeness of the contributed data;

D. the PHCS editing and screens violate fundamental statistical precepts and potentially skew the resulting data;

E. the determination of the UCR is premised on the total number of charges collected, not the charges of specific providers for specific procedures; and

F. the PHCS Database did not meaningfully determine a relevant medical market area in which to compare charges.

For all of the reasons expressed in this Report and Appendix, I conclude that the PHCS Database is statistically unreliable for the end use of determining UCR.

I may change or add to my opinions expressed in my report. I will consider any additional information provided to me. I understand that additional testimony and additional documents may be produced.

I may also respond to additional matters raised by Health Net and to testimony and opinions offered by Health Net witnesses.

I expect to rely on various exhibits at trial, including demonstratives, but these exhibits have not yet been finalized.

Bernard R. Siskin

Dated: March 31, 2004

Bernard R. Siskin, Ph.D.

Appendix A

Introduction

This Appendix summarizes facts regarding the PHCS database. A brief history of the PHCS Database (Section 1) is followed by an overview generally explaining its features, including the four data points that it collects as its "actual charge" information (Section 2). Other PHCS data collection issues are discussed, including the use of aged data (Section 3(a)); Data Contributors' self-selection of submitted data (Section 3(b)); and the fact that no data audits are performed (Section 3(c)). PHCS's Editing Processes are the summarized including a description of routine checks (Section 4(a)); an Editing Overview (Section 4(b)); the different phases of PHCS's edits and the editing processes utilized (Section 4(c)). In the final section, PHCS's derived charge methodology is discussed.

Section 1 **HISTORY**

From 1973 until 1998, the PHCS database was owned and operated by the Health Insurance Association of America ("HIAA"), a trade organization for insurance companies. While some Data Contributors were HIAA members, HIAA membership was not required for either Data Contributors or subscribers (*e.g.*, users who paid a subscription fee for the final PHCS data). HIAA committees, through insurance companies which were HIAA members, determined the critical issues regarding the methodology and substance of the PHCS database. In October of 1998, Ingenix, a wholly owned subsidiary of United HealthGroup (the parent corporation of United Healthcare) acquired the PHCS database from HIAA.

Data contributors contributed raw data ("Raw Data"), typically on magnetic tape, to the PHCS data processor, which was Bridgestone-Firestone throughout the 1990's. Data

Contributors' Raw Data were subject to numerous edits, the substance of which are explained more fully in Section 4 *infra*. In general, only Data Contributors that contributed Raw Data were able to obtain the edited data that is printed by PHCS every six months ("Final Output").[9] Only Raw Data that "passed" the various edits were credited to Data Contributors.[10] The edits include both routine edits (*e.g.* ridding the database of errors, such as a 4-digit CPT code) and substantive edits (*e.g.*, removing high charges based on a formulaic approach).

Section 2 **OVERVIEW**

The PHCS database is principally a collection of medical, surgical, dental and related charge data contributed primarily by some (but not all) insurance companies ("Data Contributors"). The companies extract certain limited information (data points) from reimbursement claim forms submitted to them by beneficiaries or doctors. The PHCS collected, with minor exceptions, only the following four data points: the date of service; the five digit CPT code describing the procedure (excluding any 2 digit modifier used to indicate an alteration from the stated CPT description); the first 3 digits of the zip code where the procedure was performed (PHCS designated this as a "geozip"); and the provider's charge for the procedure. The four data points contain no provider-specific information (*e.g.*, physician or not; specialist or not; credentialed or not); no patient-specific information (*e.g.*, the age or condition of the patient); no

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[9] Final Output is produced in various media, including electronic versions, and with varying amounts of data. One version is referred to as "AC/DC" which includes data based on both actual charges ("AC") and derived charges ("DC").

[10] For example, for the 1995 surgical system, CIGNA received more than $25,000 for its contributed data to PHCS; Aetna, the highest contributor, contributed over 6 million surgical charges in 1995 and received over $50,000 from PHCS. For the 1995 medical system, CIGNA received over $47,600 in "dollars credit" while Aetna received over $57,000 for its contribution of 55 million acceptable records.

procedure-specific information (*e.g.*, comparatively unusual, difficult or simple procedure); and no place-specific information (*e.g.*, the type of facility).

Not all insurance companies contributed Raw Data to the PHCS Database, either because they chose not to subscribe or because they designated themselves an HMO or PPO and therefore avoided any obligation to contribute data.[11] (Defendant Health Net received Final Output but was not considered a required Data Contributor because it identified itself as an HMO or PPO).

a) CPT Code: Failure to Consider Modifiers

One of the four data elements the PHCS Database captures is the five-digit CPT code the American Medical Association created to identify one of nearly 10,000 medical or surgical procedures. Although a CPT code is a helpful description of a procedure, it is somewhat general and may, in certain circumstances, not provide a complete reflection of the services provided. Providers typically use two-digit modifiers, also AMA created, for use in conjunction with the CPT codes: "to indicate that a service was altered in some way from the stated CPT description without actually changing the basic definition of the service."[12] These modifiers indicate a change in the service that may signal a different charge from the charge that would have been billed for the CPT code absent a modifier. The AMA, which authors and licenses the CPT terminology, specifies that a 5-digit CPT code with a modifier represents a different procedure than a 5-digit CPT code without a modifier. Yet the PHCS database ignores this caution.

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[11] An optional Data Contributor (*e.g.*, a Data Contributor with fewer than 100,00 covered lives) was free to contribute Raw Data but was not required to do so. An optional Data Contributor which did not satisfy its minimum would have to pay more, but would not be ineligible to receive Final Output.

[12] This description comes from the 2003 National Fee Analyzer, a document created by Ingenix (the current owner of the PHCS database) and sold to physicians for use in evaluating and setting their rates. 2003 National Fee Analyzer (Ingenix), at 13.

For example, a number of modifiers reflect services that would warrant a reduced charge from what the "usual" rate would be for the service. These include modifier -52, for "reduced services," to reflect circumstances where "a service or procedure is partially reduced or eliminated at the physician's discretion," or modifiers -54, -55 or -56, which indicate that the billing charge related solely to "surgical care only," "postoperative management only," or "preoperative management only," respectively. In addition, modifiers may be used to indicate other factors warranting lower charges, such as assistant surgeons (modifier -80), who, according to PHCS/Ingenix, "usually charge 15 percent to 25 percent of their normal fee for performing the surgery alone," or a "minimum assistant surgeon" (modifier -81), which "is frequently used to indicate that a nurse or other non-physician provided assistance," with Ingenix stating that "[m]inimal assistant surgeons usually charge from 10 percent to 15 percent of the surgeon's fees for their services."

Because PHCS ignored these modifiers, the PHCS Database does not differentiate between these reduced charges and the usual, unreduced charges for the CPT code without a modifier. Thus, a charge from a nurse or non-physician is given equal weight in the PHCS Database to the surgeon's charge, even though the former is normally only 10-15% of the latter. Providers and modifiers in some instances report circumstances which explain higher than usual charges. An example of such an instance is modifier -21, relating to "prolonged evaluation and management services," or modifier -22, which indicates "unusual procedural services."

In the PHCS Database, it is impossible to determine which charges reflect a procedure billed with the five-digit CPT code alone and which ones were billed with modifiers, either reducing or increasing charges. Its failure to account for 2 digit modifiers means that the PHCS Database combines unlike procedures, even though such procedures use the same general CPT

code.

b) Geozip Issues

The PHCS Database uses geozips as a proxy for the provider's "geographic area." Geozips, however, are used uniformly without any evaluation to determine whether they comprise a true medical market or not. PHCS/Ingenix concedes that geozips do not equate with true medical markets, as reflected in its comments regarding medical services in New York City:

> Because the fee ranges in the Analyzer are based on the first three digits of your geozip, you need to assess where your locale stands in relation to this three-digit area. For example, many three digit areas contain both urban and rural locales with different charging patterns. Use your *judgment* to determine how to determine how to interpret the fee range for your particular community.

Id. at 7 (emphasis added). The PHCS used 3 digit geozips without regard to whether they contained a mix of rural and urban areas, or different charging patterns.

Section 3 **OTHER DATA COLLECTION ISSUES**

a) Use of Aged Data

Each PHCS cycle purported to be a six month "update" of charge data. Data Contributors, however, were free to contribute Raw Data for the entire 12 month period prior to the submission deadline. For example, for a May 31 medical system submission deadline, Data Contributors were free to contribute Raw Data for the period May 1 (of the prior year) through April 30, even though the "claim processing date range" for such cycle was November 1 – April 30. Similarly, for a March 31 surgical system submission deadline, Data Contributors were free to contribute Raw Data for the period March 1 (of the prior year) through February 28, even though the claim processing date range was September 1 – February 28.

In addition to the most recent six months of charges, the PHCS incorporated the prior six months of Final Output data in full in the final processing phase for the "update," in addition to using this later to set the high-low screens (explained *infra*) during the preliminary phase. The net affect was to use data from the prior years' submission (which included data then two years old) to determine what data to exclude from the current "update." As explained by PHCS, the July 1998 medical system update included data from May 1, 1997 through April 30, 1998. Similarly, the May 1998 surgical system update included data from March 1, 1997 through February 28, 1998. Each six month update includes older data from prior cycles. These data are not adjusted for inflation.

b) Data Contributors' Self Selection

A Data Contributor knew in advance the substance of many, if not all, of the edits that PHCS used (from PHCS "error" reports). Accordingly, a Data Contributor could tailor its data contributions to avoid having its Raw Data excluded.

PHCS's data reports reflect a substantial difference in the amount of data contributed by Data Contributors. John Hancock, with only 65,000 covered lives, contributed over 460,000 records while Data Contributor #17 (Mutual of Omaha) with over 510,000 covered lives contributed under 350,000 records. Thus, Mutual of Omaha contributed 25% fewer records than John Hancock, even though Mutual of Omaha had more than eight times the number of covered lives. This large disparity (which is common to other Data Contributors listed) raises the question of whether John Hancock contributed duplicate data, Mutual of Omaha pre-edited (or otherwise tailored) its data or both.

c) No Data Audits

PHCS did not audit Data Contributors or instruct Data Contributors to contribute all of their potential Raw Data.

5. PHCS'S EDITING PROCESS

a) Routine Checks

Routine checks include a clerical review of the four data points reflected in the Raw Data to check for data entry errors. For example, if the 3 digit zip code does not correspond to the first 3 digits of an actual U.S. postal zip code (*e.g.* 100), then all four data points of that record will be deleted. As noted by Ingenix in its Fee Analyzer product in discussing the limitations on the accuracy of an actual charge database (such as the PHCS Database): "studies show that up to 30 percent of all medical bills are coded inaccurately – a further compromise to good data analysis." Ingenix also noted that an actual charge database "presupposes coding accuracy" which is likely unjustified.

b) Editing Overview

PHCS edited the Raw Data in two distinct phases. First, PHCS edited data separately for each Data Contributor. At the conclusion of the preliminary phase, PHCS sent each Data Contributor a report summarizing the amount of its Raw Data that survived and failed the screening and edits. A "required" Data Contributor (*e.g.*, any insurer with more than 100,000 covered lives) had to contribute a certain minimum amount of acceptable data. Because of the manner in which the edits worked, a Data Contributor could receive credit for more acceptable records by contributing fewer records, with less variation between its low and high charges. The PHCS did not instruct Data Contributors to submit all of their data; rather, Data Contributors were free to submit as much (or as little) of their data as they wished, so long as they satisfied

their minimum. Only Raw Data that survived all edits counted toward an insurer's "acceptable" records for its minimum.[13] Data Contributors received "cash credit" if they contributed more than twice their minimum. A Data Contributor that failed to satisfy its minimum had all of its Raw Data excluded and did not receive the Final Output for that cycle.[14]

If there was sufficient time left in the processing cycle, PHCS permitted Data Contributors that did not satisfy their minimum (and would have all of their Raw Data excluded for that cycle) to resubmit Raw Data after receiving PHCS reports detailing the substance of the edits and which of their Raw Data had failed.

Following the first phase edits (on both the originally and resubmitted Raw Data), PHCS then combined the data of all contributors for its second phase edits.

c) Substantive Edits – First Phase Edits

(1) Mean Median Ratio Edit

For each Data Contributor, PHCS analyzed the mean/mean ratio for each procedure code as a group, regardless of where in the United States such procedures may have been performed. The mean is the average charge, while the median is the middle value (50% lower and 50% higher). As previously illustrated, if there were 500 charges for medical CPT code 99202 (an office visit) contributed by a Data Contributor for procedures performed all over the U.S., with 200 billed at $10, 100 at $30, and 200 at $100, the median would be $30 and the mean would be

[13] For the medical system, a required Data Contributor's minimum was the larger of 50% of its self-reported number of covered lives or 50,000 "acceptable records." For the surgical system, a required Data Contributor's minimum of the larger of 5% of its self-reported number of covered lives or 5,000 "acceptable records." As explained by PHCS, an acceptable record "is an input record that successfully passes all HIAA edits." [H001741].

[14] The PHCS did not require Data Contributors to contribute data relating to anesthesia, HCPCS (*e.g.*, drugs and medical equipment) and hospital services.

$50. The mean to median ratio for that procedure for that Data Contributor would be 50 to 30 or 1.66.

PHCS eliminated Raw Data if the mean to median ratio was above 1.5 for any medical system CPT code or 2.5 for any surgical system CPT code. (Medical CPT codes are numbered 70000 through 99999, while surgical CPT codes are numbered 00001 through 69999). This ratio was a formulaic rule to exclude data across all CPT codes and was not based on any medical judgment. This edit was used only to exclude charges on the high end; there was no corresponding edit used to exclude low charges. Using the example of the 500 charges for CPT code 99202 above, the Data Contributor would have all of its data for CPT code 99202 eliminated (with no credit towards satisfying its minimum) because the mean to median ratio for such procedure (1.66) exceeded 1.5.

This edit would have caused the elimination of all 500 charges for CPT code 99202 from the PHCS database or resubmission by the data contributor which had to exclude some or all of the high end charges to make the data fall within the 1.5 ratio. The submission process uses unblinded procedures for both pre- or post rejection edits.

(2) High-Low ("Tukey") Screens

PHCS also used high-low screens to exclude data at the preliminary phase of data processing. These high-low screens are sometimes referred to by PHCS as "Tukey screens." These rules are formulaic and do not assess whether a charge is actually valid or invalid. As a methodology to flag observations to be studied, "Tukey" screens are fine. Proper use of "Tukey" screens, however, requires reviewing outliers as opposed to automatically deleting the possibly valid data.

Before 1996 or thereabouts, PHCS applied Tukey high-low screens to geographically specific areas. After 1996, PHCS began to use data from across the United States ("USA means") to set such high-low values.

(3) Additional Preliminary Edits

By 1996, the PHCS was subjecting all medical and surgical charges to several additional "front end" substantive edits, two of which eliminated data on the high end and one of which eliminated data on the low end. On the high end, Raw Data would be eliminated if it exceeded a "USA mean" by 8 times, or the ratio between its contributed 95th and 50th percentile values exceeded a predetermined value. On the low end, Raw Data would be eliminated if it was less than 10% of the USA mean. The USA mean is a non-geographic specific mean value based on nationwide charge data. The basis for these formulaic deletions is unclear.

d) Second Phase Edits

The second phase combined all contributors' data and then performed the edits on the combined data. At the second phase, all of the Raw Data that had survived the First Phase Edits were then pooled for all Data Contributors. High-low screens and various "back end" edits were applied which eliminated additional Raw Data. At the conclusion of the editing, PHCS excluded Data Contributors (and all of their contributed data) if less than 75% of their contribution survived all of the edits and screens.

Section V DERIVED CHARGE METHODOLOGY

For all of the CPT codes for which Final Output reflects fewer than nine (9) actual charges in a geozip, the PHCS "derives" a charge. PHCS "derived data" significantly differs from PHCS "actual charge data" because it relies on external measurements (such as relative values) rather than a convenience sample. PHCS "derived data" does make use, in part, of the

PHCS actual charge data in calculating "conversion factors" for each CPT code in a geozip. In order to calculate a conversion factor for CPT code 43235 (upper gastrointestinal endoscopy), for example, the PHCS would incorporate the actual data for CPT codes that are within the same bodily area (*e.g.*, digestive). PHCS's derived data methodology, more fully described in its subscriber reference manual, in essence combines PHCS actual charge data with various external data (such as relative values produced by a private source, McGraw-Hill). PHCS derived data is flawed for at least the following reasons: (i) it relies on PHCS actual charge data, which is invalid as documented in this report; (ii) it relies on relative values which may or may not be the product of informed medical judgments (as opposed to using, for example, the government-produced relative values) and (iii) it presupposes - - without the exercise of medical judgment needed to justify such a presupposition - - that it is appropriate to set a price for an uncommon CPT code (one that did not generate at least nine actual charges) by referring to the charges for more common (and less complex) procedures.

A 1996 PHCS study of Florida noted that more than 75% of all surgical CPT procedure codes across Florida were derived. Of 4,868 surgical CPT codes, 75.10% were derived and 24.90% were actual charges. As Ingenix has stated, "since 80 percent of procedures billed are represented by less than 5 percent of codes, many statistical holes develop where the quantity of data is insufficient for confident analysis." Since many beneficiaries seek out-of-network care for non-routine procedures, it is reasonable to assume that derived charges are used to continue UCR in most instances.

Comparisons PHCS made between actual and derived values for various lab procedures reflect a significant disparity between them. PHCS reports document a significant disparity between the actual charge and the derived charge for the same CPT codes. Most often, the

derived charge was much less than the actual charge, but in some instances, the derived charge was greater than the actual charge. For example, for CPT code 881551 (pap smear interpretation), the actual charge was $23 while the derived charge was $13.30. Other similar significant variations between PHCS actual and derived charges suggest that the PHCS methodologies for determining actual and derived charges are arbitrary and unreliable.

LECG
ECONOMICS
FINANCE

1608 Walnut Street, Ste. 1200
Philadelphia, PA 19103
T: 215.546.4950
F: 215.546.3568
statgroup@lecg.com

Biographical History
Bernard R. Siskin, Ph.D.

Bernard Siskin received his B.S. degree in Mathematics from the University of Pittsburgh and a Ph.D. in Statistics from the University of Pennsylvania. For many years, he taught statistics at Temple University and served as Chairman of the Department of Statistics.

Dr. Siskin has specialized in the application of statistics in law, particularly in the area of analyzing data for statistical evidence of discrimination. He has testified for both plaintiffs and defendants in more than 200 cases, many of which were large employment class actions. In addition to discrimination studies, he has conducted statistical studies and testified in commercial and environmental cases involving statistical issues.

Dr. Siskin has frequently been appointed by federal judges as a neutral expert to aid the court in statistical issues and he was the statistical consultant to the Third Circuit Court of Appeals Task Force on Equal Treatment in the Courts.

Dr. Siskin is the author of many articles and textbooks on statistics and quantitative techniques including *Elementary Business Statistics, Encyclopedia of Management* and *Quantitative Techniques for Business Decisions.* He has also written and lectured extensively on the use of statistics in litigation.

He has served as a statistical consultant to the U.S. Department of Justice, the Equal Employment Opportunity Commission, the U.S. Department of Labor, the Federal Bureau of Investigation, the Central Intelligence Agency, the Environmental Protection Agency, the National Aeronautics and Space Administration and Fannie Mae (the Federal National Mortgage Association) and Freddie Mac (the Federal Home Loan Mortgage Corporation), as well as numerous other federal, state and city agencies and Fortune Five Hundred corporations.

9/03

BERNARD R. SISKIN, Ph.D.
Director and Head of the Labor Practice Unit
LECG, Philadelphia Office

EDUCATION

UNIVERSITY OF PENNSYLVANIA
Ph.D., Statistics (Minor, Econometrics), 1970

UNIVERSITY OF NORTH CAROLINA
Graduate Study (Major, Economics; Minor, Statistics), 1966

UNIVERSITY OF PITTSBURGH
B.S., Mathematics (Minor, Economics), 1965

PRIOR EMPLOYMENT

CENTER FOR FORENSIC ECONOMIC STUDIES, Inc. -- Philadelphia, Pennsylvania

1991-2003 Senior Vice President. Directed projects in the application of statistics with particular emphasis in the area of discrimination.

NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC. -- Philadelphia, Pennsylvania

1989 - 1991 Senior Vice President.
1986 - 1989 Vice President. Directed projects in the application of statistics with particular emphasis in the areas of Title VII discrimination and age discrimination.

CENTER FOR FORENSIC ECONOMIC STUDIES, LTD. -- Philadelphia, Pennsylvania

1984 - 1986 President.
1980 – 1984 Consultant. Directed projects in the application of statistics with particular emphasis in the areas of Title VII discrimination and age discrimination.

TEMPLE UNIVERSITY -- Philadelphia, Pennsylvania

1992 - Present Adjunct professor of Law School.
1973 - 1984 Tenured Associate Professor of Statistics.
1973 - 1978 Chairman-Department of Statistics.
1970 - 1973 Assistant Professor of Statistics.
1968 - 1970 Instructor of Statistics.

BOOKS

What Are The Chances?: Crown Publishers, 1989 (with J. Staller).

Elementary Statistics: A First Course: Duxbury Press 1982 (with R. Johnson)

Elementary Business Statistics: Duxbury Press, 1st Edition 1979, 2nd Edition 1985, (with R. Johnson)

Encyclopedia of Management: McGraw Hill 1979 (ed. Les Bechtel)

Quantitative Techniques for Business Decisions: Prentice Hall 1976 (with R. Johnson).

ARTICLES (Last 10 Years)

"Litigating Employment Discrimination & Sexual Harassment Claims" Litigation Handbook Series, 2002, with D. Griffin.

"Utilizing Statistics in Discrimination Cases" Litigation Handbook Series, 2001.

"Defending and Proving Damages in Employment Discrimination Cases" Litigation Handbook Series, 2000, with B. Sullivan, J. Staller, and E. Hull.

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"Use of Statistical Models to Provide Statistical Evidence of Discrimination in the Treatment of Mortgage Loan Applicants: A Study of One Lending Institution" Mortgage Lending, Racial Discrimination and Federal Policy, Urban Institute Press, 1996, J. Georing and R. Wienk, eds.

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ARTICLES (Last 10 Years) (continued)

"Relationship Between Performance and Banding," Human Performance, Vol. 8, No. 3, July 1995.

"Statistical Issues in Litigating Employment Discrimination Claims" Federal Publications, 1993.

"Use of Statistical Models to Provide Statistical Evidence of Discrimination in the Treatment of Mortgage Loan Applicants: A Study of One Lending Institution" Discrimination and Mortgage Lending Research and Enforcement Conference Department of Housing and Urban Development, May 1993.

SPEECHES (Partial List)

Pennsylvania Human Relations Commission

International Organization of Human Rights Association

Women's Law Caucus: National Conference

Law Enforcement Assistance Administration

Law Education Institute

Federal Bar Association

American Bar Association

Practising Law Institute

National Center on Aging

Michigan Bar Association

Ohio Bar Association

Alabama Bar Association

Defense Research Institute

American Statistical Association

Institute of Industrial Research

Harvard University

Penn State University

STATISTICAL CONSULTANT (Partial List)

Federal Bureau of Investigation (FBI)

U. S. Justice Department

Equal Employment Opportunity Commission (EEOC)

Third Circuit Court of Appeals Task Force on Equal Treatment in the Courts

Central Intelligence Agency (CIA)

Attorney General's Office of the Commonwealth of Pennsylvania, and states of California, Oregon, Massachusetts, Connecticut, Mississippi, Louisiana and New Jersey

Municipal Court of Philadelphia

U.S. Department of Agriculture

U. S. Department of Labor

Oregon Board of Higher Education

Massachusetts Board of Higher Education

Pennsylvania Human Relations Commission

Environmental Protection Agency (EPA)

International Organization of Human Rights Associations

Office of Federal Contract Compliance, Department of Labor (OFCCP)

National Oceanic and Atmospheric Administration (NOAA)

National Aeronautics and Space Administration (NASA)

U.S. Department of Commerce

Freddie Mac (Federal Home Loan Mortgage Corporation)

Fannie Mae (Federal National Mortgage Association)

Numerous major private corporations

Testimony List for Bernard R. Siskin, Ph.D.

Year	Case Name	Location	Activity	
2004	R. Greenway v. Mitsubishi	Philadelphia, PA	Deposition	Defendant
2004	K. Carpenter et al . v. The Boeing Company	Philadelphia, PA	Deposition	Plaintiff
2004	Jarvis C. Jones v. The St. Paul Companies	Philadelphia, PA	Deposition	Defendant
2004	Cynthia McReynolds v. Sodexho Marriott	Washington, DC	Deposition	Plaintiff
2004	Boebel v. Combined Insurance	Chicago, IL	Deposition	Defendant
2003	M. Beck et al v. The Boeing Company	Dist. of Kansas	Deposition	Plaintiff
2003	EEOC v. Target	Philadelphia, PA	Deposition	Defendant
2003	Farina v. Iberia Airlines	Miami, FL	Trial	Defendant
2003	K. Nouri et al v. The Boeing Company	Washington, DC	Deposition	Plaintiff
2003	Sonia Ingram v. Merrill Lynch	New York, NY	Trial	Defendant
2003	Hydie Sumner v. Merrill Lynch	San Antonio, TX	Trial	Defendant
2003	Stephen Laughlin v. Allstate	Philadelphia, PA	Deposition	Plaintiff
2003	Boebel v. Combined Insurance	Northern Dist. of Il.	Declaration	Plaintiff
2003	Sims v. Allstate	St. Clair Cty., IL	Deposition	Plaintiff
2003	EEOC v. Target	East. Dist, WI	Deposition	Defendant
2003	K. Nouri et al. v. The Boeing Company	Western WA	Declaration	Plaintiff
2003	Jesus Malave v. Potter	Connecticut	Declaration	Defendant
2003	Stephen Laughlin v. Allstate	Philadelphia	Deposition	Plaintiff
2003	T. Grosz, et al. v. The Boeing Company	Central Dist., CA	Declaration	Plaintiff
2003	Janet Howard v. US Department of Commerce	Philadelphia, PA	Declaration	Defendant
2003	Denise Jones v. Northrop Grumman	Chicago Il.	Trial	Defendant
2003	Sims v. Allstate	St. Clair Cty., IL	Deposition	Plaintiff
2003	US v. State of Delaware	Los Angeles, CA	Trial	Plaintiff
2003	Glaxo Group Limited et al. v. Ranbaxy Pharm.	New Jersey	Trial	Plaintiff
2003	Jones v. GPU	East.Dist., PA	Deposition	Defendant
2003	T. Grosz, et al v. The Boeing Company	Central Dist.,CA	Declaration	Plaintiff
2003	Glaxo Group Limited et al v. Ranbaxy Pharm.	New Jersey	Trial	Plaintiff
2003	Moeller v. Farmers of Washington	County Pierce, WA	Deposition	Plaintiff
2003	E. L. Anderson et al v. The Boeing Company	Northern Dist. ,OK	Declaration	Plaintiff
2003	T. Grosz, et al v. The Boeing Company	Central Dist., CA	Deposition	Plaintiff
2003	E. L. Anderson et al v. The Boeing Company	Northern Dist., OK	Deposition	Plaintiff
2003	Glaxo Group Limited v. Ranbaxy Pharmaceutic	New Jersey	Deposition	Plaintiff
2003	E. Moore et al v. The Boeing Company	Eastern Dist. , MO	Declaration	Plaintiff
2003	Smith et al. v. Serv.Employ.Internatl.Union	East. Dist., MI	Declaration	Defendant
2003	H. Smith & C. Brooks v. S.E.I.U.	Eastern Dist. MI	Declaration	Defendant
2003	T. Scammell v. Farmers Insurance	County of Pierce, WA	Affidavit	Defendant
2003	Smith et al v. Serv. Employ. Internatl. Union	East. Dist., MI	Declaration	Defendant
2003	Heilman et al. v. Honeywell, Inc.	Dist. of AR	Deposition	Defendant
2003	E. Moore et al v. Boeing Company	East. Dist., MO	Affidavit	Plaintiff
2003	Miller v. Baltimore Gas & Electric	Baltimore,MD	Deposition	Defendant
2003	M. Dean et al v. The Boeing Company	Dist of Kansas	Affidavit	Plaintiff
2003	P. Schams v. Combined Insurance	North Dist., IL	Affidavit	Defendant
2003	M. Dean et al v. The Boeing Company	Dist of Kansas	Deposition	Plaintiff
2003	E. Moore et al v. Boeing Company	East. Dist., MO	Deposition	Plaintiff
2003	M. Dean et al v. The Boeing Company	Dist of Kansas	Affidavit	Plaintiff
2003	U.S. v. Delaware State Police	Los Angeles, CA	Deposition	Plaintiff
2002	U.S. v. Delaware State Police	Los Angeles, CA	Deposition	Plaintiff
2002	Conrad & Zakheim v. AmeriHealth	Camden, Cty. NJ	Affidavit	Defendant
2002	A. Delgado et al. v. John Ashcroft	Washington,DC	Trial	Defendant
2002	Farris v. Safeco	Marion, OR	Affidavit	Defendant
2002	F. Butler et al v. Matsushita	Newnan Div., GA	Affidavit	Defendant
2002	J. Roberts v. Coast National Insurance Co	Orange Cnty., CA	Affidavit	Plaintiff
2002	S. B. Long & D. Burnham v. Dept. of Justice	Dist. of Columbia	Affidavit	Defendant

Testimony List for Bernard R. Siskin, Ph.D.

Year	Case Name	Location	Activity	
2002	Sitkon et al v. Goodyear Tire & Rubber	North. Dist., OH	Affidavit	Defendant
2002	EEOC v. Nicholas Markets	New Jersey	Deposition	Defendant
2002	Warren Tisdale v. FedEx Gound	North. Div., MD	Affidavit	Defendant
2002	US v. Milwaukee Brotherhood of Firefighters	East. Dist. WI	Affidavit	Plaintiff
2002	Sitkon et al v. Goodyear Tire & Rubber	North. Dist., OH	Affidavit	Defendant
2002	Amberger et al v. American Coal	Saline Cty, IL	Trial	Defendant
2002	U.S. v. Delaware State Police	Los Angeles, CA	Deposition	Plaintiff
2002	Bloodworth v. Geico Ins.	Nashville, TN	Deposition	Plaintiff
2002	Amberger et al v. American Coal	Saline Cty, IL	Deposition	Defendant
2002	US v. City of Los Angeles	Central Dist. of CA	Affidavit	Plaintiff
2002	Ellis v. Metropolitan Water Reclaim	North. Dist., IL	Affidavit	Defendant
2002	U.S. v. Wal-Mart Inc et al.	Washington, DC	Deposition	Defendant
2002	V. Velez, et al v. QVC Inc	East. Dist of PA	Affidavit	Defendant
2002	Sheppard v. Consolidated Edison	Eastern Dist. NY	Affidavit	Both Partie
2002	C. C. McReynolds v. Sodexho Marriott	Dist. of Columbia	Affidavit	Plaintiff
2002	Reynolds v. City of Chicago	Chicago, IL	Trial	Defendant
2002	Quintanar v. Reno	West. Dist., CA	Deposition	Defendant
2002	G. Carson et al. v. Giant Foods Inc. et al.	Dist. of MD	Affidavit	Defendant
2002	Sims et al. v. Allstate Ins.	St.Claire Cty.Il	Deposition	Plaintiff
2001	David Moeller v. Farmers Ins. Co.	Pierce Cnty,WA	Affidavit	Plaintiff
2001	Amberger et al v. American Coal	Saline Cty, IL	Deposition	Defendant
2001	K. Nouri et al v. The Boeing Company	West. Dist. WA	Affidavit	Plaintiff
2001	Quintanar v. Reno	West. Dist., CA	Affidavit	Defendant
2001	C. C. McReynolds v. Sodexho Marriott	Baltimore, MD	Affidavit	Plaintiff
2001	Anderson v.Goodyear	Eagle, CO	Trial	Defendant
2001	Bloodworth v. Geico Ins.	Nashville, TN	Affidavit	Plaintiff
2001	Lucy Sales v. County of Contra Costa	North. Dist., CA	Trial	Defendant
2001	Sheppard v. Consolidated Edison	Eastern Dist. NY	Affidavit	Both Partie
2001	K.Nouri v. Boeing Co. et al.	Seattle, WA	Deposition	Plaintiff
2001	Tower v. Cole	Jackson, MS	Affidavit	Plaintiff
2001	G. Carson et al v. Giant Food Inc et al	Dist. of Maryland	Affidavit	Defendant
2001	U.S. v. City of Garland Texas	Garland, TX	Trial	Plaintiff
2001	US v. State of New Jersey et al	District of NJ	Affidavit	Plaintiff
2001	NYP Holdings INC. v. Pressman	South. Dist. NY	Trial	Plaintiff
2001	K. Nouri et al v. The Boeing Company	West. Dist., WA	Affidavit	Plaintiff
2001	E. Redd v. P.H. O'Neill Secty. Dept. of Treas	Dist. of Columbia	Affidavit	Defendant
2001	C. C. McReynolds v. Sodexho Marriott	Baltimore, MD	Deposition	Plaintiff
2001	US, et al. v. City of Milwaukee	Milwaukee, WI	Trial	Both Partie
2001	Lucy Sales v. County of Contra Costa	North. Dist., CA	Trial	Defendant
2001	Mary Beck et al v. The Boeing Company	West. Dist., WA	Affidavit	Plaintiff
2001	Polydyne v. City of Philadelphia	Philadelphia, PA	Trial	Plaintiff
2001	D. Alexander v. City of Los Angeles, et al.	Central Dist. of CA	Affidavit	Defendant
2001	Polydyne v. City of Philadelphia	Philadelphia, PA	Deposition	Plaintiff
2001	D. Alexander v. City of Los Angeles et al	Central Dist. of CA	Affidavit	Defendant
2001	Mary Beck et al. v. The Boeing Company	West. Dist., WA	Affidavit	Plaintiff
2001	Loughridge v.Goodyear	Washington,DC	Deposition	Defendant
2001	Lucy Sales v. County of Contra Costa	North. Dist., CA	Trial	Defendant
2001	Stilwell v. Orleans County et al.	Buffalo, NY	Affidavit	Defendant
2001	EEOC v. Venator Group	Newark NJ	Deposition	Defendant
2001	M.Beck et al v. Boeing Co. et al.	Seattle, WA	Deposition	Plaintiff
2001	A. Ambrose v. Permanent Genl Assurance	Davidson Cty. TN	Deposition	Plaintiff
2001	M. Trent et al v. Johnson & Johnso	Dist. of NJ	Deposition	Defendant
2001	Lucy Sales v. County of Contra Costa	North. Dist., CA	Affidavit	Defendant

Testimony List for Bernard R. Siskin, Ph.D.

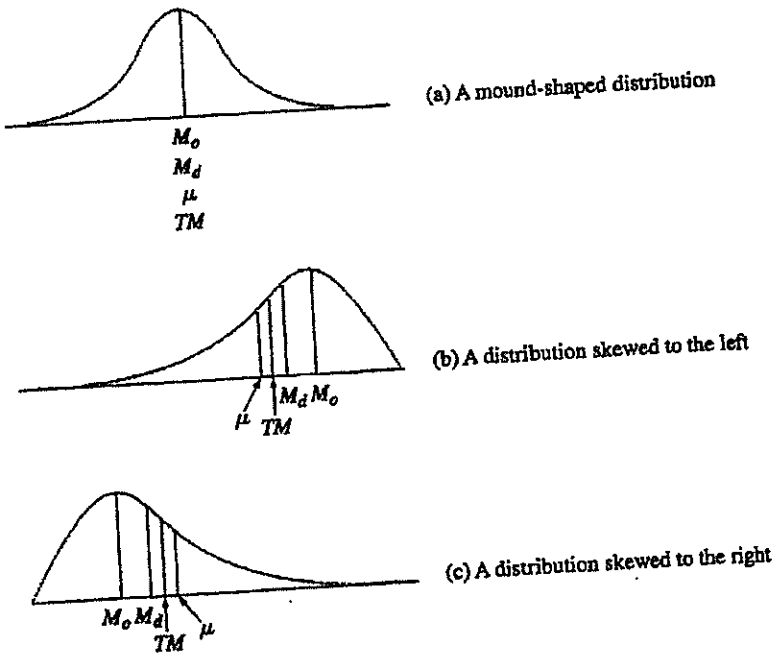
Year	Case Name	Location	Activity	
2001	Lucy Sales v. County of Contra Costa	North. Dist., CA	Deposition	Defendant
2001	EEOC v. Venator Group	Newark NJ	Deposition	Defendant
2001	Fields and Walker v.Abbott Labs.	Chicago, Il	Affidavit	Plaintiff
2001	K.Nouri v. Boeing Co. et al.	Seattle, WA	Deposition	Plaintiff
2001	L.Hood v. AFSCME	Washington, DC	Affidavit	Defendant
2001	K. Nouri et al. v. The Boeing Company	West. Dist., Wa	Affidavit	Plaintiff
2001	Mary Beck et al v. The Boeing Company	West. Dist., WA	Affidavit	Plaintiff
2000	EEOC v. Local 28	S.Dist.NY	Affidavit	Court
2000	R. Busani v. United Services Auto	Pierce Cnty,WA	Affidavit	Plaintiff
2000	Bacon v. Honda of America	Columbus, OH	Trial	Defendant
2000	David Moeller v. Farmers Ins. Co.	Pierce Cnty,WA	Deposition	Plaintiff
2000	R. Murphy v. Natl. Imagery & Mapping Agency	Baltimore MD	Affidavit	Defendant
2000	B. Fuller et al v. Instinet	Southern NY	Affidavit	Defendant
2000	Fields and Walker v.Abbott Labs.	Chicago, Il	Deposition	Plaintiff
2000	Sheppard v. Consolidated Edison	Eastern Dist. NY	Affidavit	Both Partie
2000	Cazabet v. Metropolitan Life	Rhode Island	Affidavit	Plaintiff
2000	L. Coyle v. Sharp Electronic Corp.	Bergen Cnty, NJ	Affidavit	Defendant
2000	Fields and Walker v.Abbott Labs.	Chicago, Il	Affidavit	Plaintiff
2000	Bacon v. Honda of America	Columbus, OH	Deposition	Defendant
2000	Cazabet v. Metropolitan Life	Rhode Island	Deposition	Plaintiff
2000	Bacon v. Honda of America	Columbus, OH	Affidavit	Defendant
2000	R. Muhammad et al v. Giant Food Inc. et al	District of Maryland	Affidavit	Defendant
2000	U.S. v. City of Garland Texas	Garland, TX	Deposition	Plaintiff
2000	Reynolds v. City of Chicago	Chicago, IL	Trial	Defendant
2000	Pickett v. Iowa Beef Processor	Middle Dist. Al.	Deposition	Plaintiff
2000	Muhammad et al v. Giant Food	Dist. of MD	Deposition	Defendant
2000	E. Johnson et al. v. Janet Reno,Atty. Genl.	Dist. of Columbia	Affidavit	Defendant
2000	Ringue v. Kaufman and Broad	San Francisco CA	Trial	Defendant
2000	Ringue v. Kaufman and Broad	San Francisco CA	Deposition	Defendant
2000	B. J. Lauricia v. Microstrategy Inc.	Dist. of Columbia	Affidavit	Defendant
2000	Lewis v. Booz-Allen & Hamilton	Dist of Columbia	Affidavit	Defendant

By trimming the data, we are able to reduce the impact of very large (or small) values on the mean, and thus get a more reliable measure of the central value of the set. This will be particularly important when the sample mean is used to predict the corresponding population central value.

Note that in a limiting sense the median is a 50% trimmed mean. Thus, the median is often used in place of the mean when there are extreme values in the data set. In Example 3.5, the value $807.80 is considerably larger than the other values in the data set. This results in 10 of the 15 accounts having values less than the mean and only 5 larger. The median value for the 15 accounts is $61.61. There are 7 accounts less than the median and 7 accounts greater than the median. Thus, in selecting a typical overdue account, the median is a more appropriate value than the mean. However, if we want to estimate the total amount overdue in all 150 accounts, we would want to use the mean and not the median. When estimating the sum of all measurements in a population, we would not want to exclude the extremes in the sample. Suppose a sample contains a few extremely large values. If the extremes are trimmed, then the population sum will be grossly underestimated using the sample trimmed mean or sample median in place of the sample mean.

skewness

In this section, we discussed the mode, median, mean, and trimmed mean. How are these measures of central tendency related for a given set of measurements? The answer depends on the **skewness** of the data. If the distribution is mound-shaped and symmetrical about a single peak, the mode (M_o), median (M_d), mean (μ), and trimmed mean (TM) will all be the same. This is shown using a smooth curve and population quantities in Figure 3.17(a). If the distribution is skewed, having a long tail in one direction and a single peak, the mean is pulled in the direction of the tail; the median falls between the mode and the mean; and depending on the degree of trimming, the trimmed mean usually falls between



(a) A mound-shaped distribution

(b) A distribution skewed to the left

(c) A distribution skewed to the right

FIGURE 3.17
Relation among the mean μ, the trimmed mean TM, the median M_d, and the mode M_o

Exhibit 6

THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY
CIVIL ACTION NO. 01-4183 (FSH)
CIVIL ACTION NO. 03-1801 (FSH)

ZEV and LINDA WACHTEL, etc.,
Plaintiffs,
-v-
GUARDIAN LIFE, et al.,
Defendant.

RENEE MC COY,
Plaintiff,
-v-
HEALTHNET, INC., et al.,
Defendants.

TRANSCRIPT
OF
PROCEEDINGS

April 10, 2008
Newark, New Jersey

B E F O R E: HONORABLE FAITH S. HOCHBERG, U.S.D.J.

A P P E A R A N C E S:

WILENTZ, GOLDMAN & SPITZER, ESQS.,
BY: BARRY M. EPSTEIN, ESQ.,
BARBARA QUACKENBOS, ESQ.,
KEVIN RODDY, ESQ.,
JORDAN LEWIS, ESQ.,
Attorneys for the Plaintiff McCoy

POMERANTZ, HAUDEK, BLOCK,
GROSSMAN & GROSS, ESQS.,
BY: D. BRIAN HUFFORD, ESQ.,
ROBERT AXELROD, ESQ.,
Attorneys for the Plaintiff Wachtel

MORGAN, LEWIS & BOCKIUS, ESQS.,
BY: JAY H. CALVERT, ESQ.,
ROBERT DE BELLIS, ESQ.,
Attorneys for the Defendants

I'm submitting enough data.

THE COURT: Are you doing okay?

THE REPORTER: (Indicates affirmative).

THE WITNESS: Thank you.

THE COURT: I have an internal radar for when the court reporter is having trouble.

THE WITNESS: I'm usually banned, I speak much too fast. Feel free to stop me if you need to.

THE COURT: Okay.

Just try to just slow down. All right?

THE WITNESS: All right.

THE COURT: Pretend you're giving a speech to 10,000 people, that tends to slow everybody down.

THE WITNESS: What -- so there was -- there is an

incentive there. I'm not saying anybody does, or anybody does per se, but their incentive is therefore to try and look at your own data to make sure that a lot of it's not going to be knocked out.

What Aetna -- and that's a problem. Because the

subsequent screenings assume you're getting all the data, not pre-screened data.

Aetna testified in a deposition that they had a process, and part of that process for their electronic data, which was most of their data, if the charge was less than -- was greater than what they actually paid, it was screened out and not sent out. So they essentially eliminated automatically the majority of their -- of the high charges to make sure the data wasn't going to get screened ultimately again, and therefore they would not meet the goals.

THE COURT: So in other words, the high charges were not contributed to Ingenix?

THE WITNESS: From Aetna.

THE COURT: How would that concern Ingenix, would it --

THE WITNESS: I'm not saying concerned, but the methodology of pre-screening their data resulted in that.

THE COURT: All right.

The result was that the high charges were

removed --

THE WITNESS: Before it got to Ingenix.

THE COURT: -- before it got to Ingenix?

THE WITNESS: Right.

THE COURT: Was there any instruction from Ingenix to remove the high charges?

THE WITNESS: No.

Ingenix asked the people to certify they're giving all their data, that they're giving the right data, that they're giving the complete data.

So people would certify they were giving complete data even if they weren't giving complete data. That's the testimony. And when Ingenix knew that, I think Aetna's deposition they talk about saying they told Ingenix, Ingenix sort of shrugged their shoulders, appears they did nothing.

MR. RODDY: Dr. Siskin, can I ask you to do me one favor. Could you bend the microphone a little bit to your right.

THE COURT: You don't have to look at me, you can look out into the courtroom. They have to hear you as much as I. You're close to me, so I can hear you. This is really a hearing and not a private conversation, and they

Exhibit 7

UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

IN RE: AETNA UCR LITIGATION	MDL No. 2020
This Document Relates to: ALL CASES	Master Case No. 07-3541 (FSH) (PS)

PLAINTIFFS' EXPERT REPORT DATED APRIL 6, 2010

Bernard R. Siskin, Ph.D.

Director and Head of the Labor Practice Unit of LECG
Philadelphia, PA

INTRODUCTION

I am submitting this Expert Report relating to Aetna's use of the Ingenix database to determine Usual, Customary and Reasonable ("UCR" aka "R&C") amounts. I have opined about the flaws in the UCR databases in the expert reports dated March 31, 2004 (HIAA) and June 15, 2006 (Ingenix) submitted in the *McCoy v. Health Net* case before this Court. On April 10, 2008, I appeared before the Court in the McCoy matter to explain the basis for my conclusions that Ingenix data is flawed and produces skewed R&C. The principles and requirements for a valid UCR database discussed in my prior reports and testimony are incorporated here.

I have been retained as an expert witness on behalf of plaintiffs ("Plaintiffs") to provide an analysis of the Ingenix databases, including the Prevailing Healthcare Charge System data and databases (hereinafter "PHCS Database") and the Medical Data Research ("MDR") database

(collectively, "Ingenix Databases") used by Aetna to determine R&C amounts for its subscriber members who have received services from non-participating medical providers (i.e., those whose charges have not been negotiated in advance with Aetna). Using a methodology that is considered reliable and generally accepted for statistical analysis, it is my opinion that the Ingenix Databases suffer from fundamental flaws that make them invalid for calculating R&C amounts.

EDUCATION AND PROFESSIONAL QUALIFICATIONS

I am a Director of LECG and work in the Philadelphia, Pennsylvania office. I received my Ph.D. in Statistics with a minor in Econometrics from the Wharton School of the University of Pennsylvania in 1970. Upon graduation, I became an assistant professor at Temple University in Philadelphia, Pennsylvania. I served as Chairman of Temple University's Department of Statistics for five years. I remained at Temple until 1984, when I resigned my tenured professorship position.

Since receiving my Ph.D., I have specialized in the application of statistics in a forensic setting. Much of my professional experience over the past thirty years has involved analyzing data and evaluating whether data are appropriate and sufficient for inferential analysis. I have written on the proper use, reliability and validity of databases (also known as data sets) for particular applications and have lectured widely on these topics. I have been retained by several courts, governmental agencies, states and private organizations to evaluate and/assess a wide variety of databases. These institutions include: the Third Circuit Task Force on Equal Treatment in the Courts, the National Aeronautics and Space Agency (NASA), the United States Justice Department, the Central Intelligence Agency, the Federal Bureau of Investigation, the Environmental Protection Agency, various states such as New Jersey, California, Connecticut, and Alaska, and numerous municipalities such as New York, Chicago, Philadelphia and Akron, along with numerous private

corporations such as: Automatic Data Processing, Amerihealth, McKesson, Lafarge, Merck, Rohm & Haas and Washington Mutual.

III. FEDERAL COURT CERTIFICATION AS AN EXPERT

I have testified in more than 100 cases on the issue of the application and use of statistical evidence. The analyses I have conducted have involved allegations regarding the presence or absence of statistical reliability in data sets. I have also been appointed by courts as a neutral, jointly-agreed-upon expert to undertake specific statistical analyses. My curriculum vita is annexed as Attachment 1.

IV. EXPERTISE

I am an expert in statistics: the science of collecting, classifying, presenting and interpreting numerical data; the analysis of data and the limitations of what can and cannot be properly inferred from data.

V. CLASS ISSUES

I understand that the Court will need to assess class issues. My expert report touches upon several class issues, including typicality, commonality and predominance.

VI. INFORMATION CONSIDERED IN FORMING MY OPINIONS

In forming my opinions, I have reviewed the materials referred to in my prior reports (dated March 31, 2004 and June 15, 2006) as well as the following documents:

Aetna-specific policies and procedures relating to R&C including discussions among claims personnel; R&C training materials; materials related to use of Aetna's internal data or outdated data or a percentage of Medicare; Documents relating to profiling, including profiling guidelines and internal discussions about their use; Deposition testimony excerpts including from Ingenix personnel (Carla Gee) and Aetna personnel (Deb Justo) and certain interrogatory answers.

Weil Gotshal letter dated December 17, 2009 to Aetna subscriber counsel listing the number of records and the percentage of Aetna's data contribution to Ingenix.

Documents identified in this report or in my prior report.

VII. DISCUSSION

A. Overview

Aetna defines R&C in relevant part as:

> Only that part of a charge which is reasonable is covered. The reasonable charge for a service or supply is the lowest of:
> - the provider's usual charge for furnishing it; and
> - the charge Aetna determines to be appropriate, based on factors such as the cost of providing the same or a similar service or supply and the manner in which charges for the service or supply are made; and
> - the charge Aetna determines to be the prevailing charge level made for it in the geographic area where it is furnished.
>
> In determining the reasonable charge for service or supply that is:
> - unusual; or
> - not often provided in the areas; or
> - provided by only a small number of providers in the area;
>
> Aetna may take into account factors, such as:

- the complexity;
- the degree of skill needed;
- the type of specialty of the provider
- the range of services or supplies provided by a facility; and
- the prevailing charge in other areas.

The definition above identifies certain of the core concepts necessary for developing an R&C standard.

If Aetna is to determine R&C consistent with this definition, it must have a database that allows it to assess the core factors. Aetna uses other data to determine R&C that does not address or consider these factors including outdated data, internal Aetna data and a percentage of Medicare..

To assess a reasonable charge for a particular medical service, one must rely on actual charges billed by similar providers for reasonably similar services performed for a similar patients (age, etc.) in a relevant geographic area. In order to determine the set of reasonably similar services, the database would need to contain information on those factors which one would expect to affect the cost of the services, such as: (i) significant differences in provider qualifications, (ii) significant differences in type of medical service provided, and (iii) significant differences in medical market area. Given this information, one could then determine which charges are reasonable and which are "too high." A review of the Ingenix databases shows that they do not (and cannot) satisfy the core concepts of reasonably similar provider qualifications, medical services rendered and medical market area in which the service is performed. In sum, the Ingenix Databases do not allow one to compute a distribution of charges which are sufficiently similar that one can reasonably assess which charges are reasonable and which charges are "too high."

B. Methodology Review

In evaluating the Ingenix Databases, I considered the following general principles:

1. the stated purpose for the data (*e.g.* any relevant or other definition);

2. the data collected and the manner of its collection;

3. the data not collected and the reasons therefore;

4. the steps taken to ensure the accuracy, comprehensiveness and completeness of the data collected;

5. the editing of the data, if any, and whether such editing impacted the resulting distribution of the data and its validity;

6. the end use for the data, and whether the data necessary for such end use have been collected; and

7. whether any biases (distortions) were introduced at any point in the methodology.

OVERVIEW

Ingenix Uses Flawed Methodology (Data Contribution and Processing) to Create the MDR and PHCS Databases

In 2000-01, Ingenix consolidated the MDR and PHCS databases and the data contribution and screening (editing) process (*i.e.*, "scrubbing") used to create them. I explain in this report how these databases share a flawed underlying methodology (including both data contribution and editing), which skews downward the amounts reported by the Ingenix databases for the percentiles at and above the 70th percentile ("Upper Percentiles"). As I note, these methodological flaws affect all CPT codes in all geographic areas. The methodology does not consider: any differentiation of services provided within a CPT code; patient age or health and conditions; patient's prior medical history; the provider's qualifications, credentials, specialty, training or experience; and the place of service (hospital, clinic or doctor's office).

The first step in Ingenix's methodology is the collection of data from voluntary Data Contributors ("Step 1"). The data it receives is a convenience sample. Ingenix fails to ensure that the convenience sample is representative of the population of charges. It fails to ensure the Contributed Data contains the fields it requested, is not pre-edited to remove high charges, does not contain non-market charges, and reflects each Data Contributor's complete population of relevant charges. It then edits or "scrubs" (*i.e.*, deletes) the data using a "scrubber" prior to analytical processing ("Step 2"). Ingenix's scrubbing is inappropriate for two reasons. First, it uses formulaic edits to identify purported statistical outliers and automatically removes them without factual basis or further investigation to determine if they are truly incorrect data points (and should be removed) or are simply high (or low) charges that should not be removed. The incorrect removal of valid charges, even if removed from both the high and low ends, biases the Upper Percentile values downward. If an equal number of valid charges are deleted from the high and low ends, the Upper Percentiles will be biased downward. Even if more valid low charges than valid high charges are removed, the Upper Percentiles will most likely be biased downward. For example, if Ingenix removes just 5 percent of total valid charges from the high end, it would have to remove 4 times that number, or 20 percent, of total charges from the low end before the 80th percentile in the "scrubbed" data is the actual 80th percentile of all the valid charges. Secondly, Ingenix's scrubbing combines the charges for a broad range of CPT codes without adjusting for differences in the spread of charges between CPT codes (*i.e.*, the "standard deviation"). This flaw tends to systematically remove valid high data points, particularly in CPT codes having a wide variation in charges (*e.g.*, because different types of providers are billing the same CPT code). This biases the Upper Percentile values downward.

The third and final step is the analysis and publication of the scrubbed data ("Step 3"). Ingenix produces MDR and PHCS data for each three-digit zip code area in the nation. The PHCS database calculates and reports the percentile distribution of reported charges for individual CPT codes having at least nine occurrences in the final database. For CPT codes for which fewer than nine charges are reported, the PHCS database reports a "derived" percentile distribution of charges. PHCS derives charge data for approximately 90 percent of all CPT codes because the vast majority of data reported is for the most common 10 percent of CPT codes. The MDR Database derives charge data for all CPT codes. Derived percentile amounts are estimated for both PHCS and MDR by: (i) grouping together various CPT charges after the different CPT charges have purportedly been adjusted so that they are comparable; (ii) computing the percentiles of the combined CPT charges; and (iii) readjusting the percentiles of the combined data to represent the percentiles of the different CPT charges. However, Ingenix fails to adjust for the differences in the spread of charges (i.e., standard deviation) within each CPT code among the combined CPT charges and, as a result, the derived percentiles are all biased (other than the mean). This flaw results in understatatement of the Upper Percentiles of the derived PHCS and MDR data. Because R&C seeks to determine what "most" providers charge for a similar service in a geographical area, the relevant data points are the Upper Percentile values. This means that the relevant data points are disproportionately affected (biased) by Ingenix's improper methodology for deriving data.

The end result of Ingenix's methodology is thatthe Ingenix data:

- Does not use appropriate statistical methodology (including sampling, data editing or data estimation) and as a result, creates data that is inappropriate and biased downward for use in computing R&C[1];

1 The bias occurs at the Upper Percentile values. Cognizant of this bias, Ingenix disclaims the use of its data to compute R&C. Ingenix publishes both the MDR and PHCS data with the following disclaimer:

- Does not ensure that the data it collects does not pre-screen out valid high charges, does not contain non-market charges, and is complete in that it contains all the requested information on all the Data Contributors' relevant charges;

- Does not ensure that the data it reports is representative of the total population of relevant charges in the geographic area;

- Does not report[2] the qualifications of the providers billing the charge data (whether medical doctor, nurse practitioner, physician assistant, etc.);

- Does not report the training, experience or expertise of the providers billing the charge data;

- Does not report modifiers billed by the providers;

- Does not report the place of service (*i.e.*, clinic, hospital, medical office) for the charge data;

"Client is responsible for decisions made and actions taken based on the database. The database is designed and intended for use by professionals experienced in the uses and limitations of claims processing, and it is client's responsibility to ascertain the suitability of the database for client's purposes. The database is provided for informational purposes only and Ingenix disclaims any endorsement, approval, or recommendation of data in the database." Gee Ex. 12 (PHCS); Ex. 39 (MDR).

Ingenix's Product Schedule agreement prior to 2005 stated:

"The Data is provided to Customer for informational purposes only. Ingenix disclaims any endorsement, approval or recommendation of particular uses of the Data. There is neither a stated nor an implied 'reasonable and customary' charge, either actual or derived; neither is there a stated nor an implied 'reasonable and customary' conversion factor. Any interpretation and/or use of the Data by Customer is solely and exclusively at the discretion of Customer. Customer shall not represent the Data in any way other than as expressed in this paragraph." PHS 7009738.

In April 2005, Ingenix's Product Schedule agreement reflected the additional italicized language:

"The Data is provided to Customer for informational purposes only. *Customer acknowledges that the Data is a tool that Customer may use in various ways in its internal business.* Ingenix disclaims any endorsement, approval or recommendation of particular uses of the Data *either in general or with respect to Customer's operations. The Data does not provide to Customer* a stated or an implied 'reasonable and customary' charge, either actual or derived. *The Data does not contain* a stated nor an implied 'reasonable and customary' conversion factor. Any *reliance upon,* interpretation *of* and/or use of the Data by Customer is solely and exclusively at the discretion of Customer. *Customer's determination or establishment of an appropriate reimbursement level or fee is solely within Customer's discretion, regardless of whether Customer uses the Data. Ingenix does not determine, on Customer's behalf, the appropriate fee or reimbursement levels for Customer and its business. Customer acknowledges that Ingenix sells both the MDR and the PHCS relative and actual charge databases, and that Customer has decided to license the PHCS database.* Customer shall not represent the Data in any way other than as expressed in this paragraph." PHS 7108744.

2 I will use the word "report" to mean "collect", "determine", "include" "identify," and "use as a basis for R&C calculations."

- Does not report the type of service (*i.e.*, inpatient, emergency, ambulatory surgery) for the charge data;
- Improperly edits out valid charges, which biases the Upper Percentiles of reported data downward; and
- Statistically incorrectly estimates derived percentile data which understates the Upper Percentile values.

I explain in detail below my critique of Ingenix's methodology and my conclusion that the MDR and PHCS databases are unreliable and invalid for determining usual, customary and reasonable ("R&C") amounts for services rendered to Aetna members by out-of-network providers. I also provide an overview of how Aetna's claims system uses the Ingenix data to make R&C determinations.

I. DETAILED DISCUSSION REGARDING INGENIX'S METHODOLOGY INGENIX'S DATA CONTRIBUTION FLAWS (STEP 1)

Proper statistical procedures require that Ingenix assess the completeness and accuracy of the data it receives from its Data Contributors, and ensure that its rules are being followed. A Data Contributor database cannot be considered valid when there is inadequate data quality control in place. Ingenix's[3] methodology for selecting a convenience sample without testing or validation results in two fundamental flaws: *first,* one cannot assume that the Contributed Data was representative of the population of charges; and *second*, there were no controls in place to ensure that Data Contributors were contributing appropriate data (e.g., market charge data, complete data reflecting all of their relevant charges, etc.) and were not pre-editing or pre-scrubbing their

3 A convenience sampling and the reward system in which reimbursement is based only on the amount of data passing screening; entices Data Contributors to eliminate high values when submitting data regardless of whether the charge was valid or not. I explain Aetna's prescrubbing of its data contribution *infra* . Another flaw is that the data contributed by each Data Contributor was not established as representative of all its charge data.

Contributed Data. The mere existence of large quantities of data would not remedy the fundamental flaws caused by incomplete, unrepresentative and pre-scrubbed Contributed Data.

Recent testimony provided by Aetna, CIGNA and Ingenix witnesses have confirmed the numerous deficiencies in Ingenix's data collection process which I discussed in prior reports. These deficiencies render the data unusable for the stated purpose of assisting Ingenix customers (such as Aetna) in determining R&C.

A. Ingenix Does Not Receive Useful Data on Provider, Place of Service, Difference in Level of Service or Type of Service within CPT Codes Necessary for Properly Estimating R&C

Ingenix has never consistently received expanded information from its Data Contributors. As a result, Ingenix only uses limited information consisting of the date of service, CPT code (5 digits only rather than 7 digits which would include modifiers), billed charge and provider's zip code. When Ingenix started to collect provider information (*e.g.*, the identity of the provider, the provider's professional degree specialty, etc.), its Data Contributors provided it partially or not at all. As a result, Ingenix continued doing its analysis and created the final PHCS and MDR data without considering provider-specific information. Data Contributors also do not consistently contribute other data fields that Ingenix purports to require, such as patient information, place of service and type of service. Thus, Ingenix does not consider these additional factors in the Ingenix databases.

Aetna, CIGNA and Guardian, all confirmed that they do not provide adequate expanded data to Ingenix. CIGNA, for example, provides fewer than half of the allegedly required data fields, and provides *no* provider-specific information (*e.g.*, the name and address of the provider; his or her licensure, specialty, etc.). At least until March 2005, when it apparently stopped contributing data, Guardian continued to contribute only the same limited four data elements that it contributed since

the 1970s and it failed to provide provider-specific and patient-specific information. Ingenix has consistently acquiesced in receiving Contributed Data that does not include most of the requested information from Data Contributors and has continued to use only the same four data fields employed since the inception of the HIAA database: billed charge, date of charge, zip code of location where service provided; and CPT code.[4]

B. CIGNA's Contributed Data Demonstrates That The PHCS Sample is Not Representative

Both currently and in the past, CIGNA has maintained multiple claims systems. When I filed my report, "Plaintiffs' Supplemental Expert Report," dated June 15, 2006, I noted that: "CIGNA contributes data to Ingenix from only four of its nine claims systems. The five claims systems from which CIGNA does not contribute data are nationwide in scope. CIGNA stated that it decided not to contribute all its data to Ingenix because contributing additional data would not increase the discount it receives from Ingenix (75 percent). CIGNA has only one claims system from which it contributes data to Ingenix that contains any HCPCS data."1

It is my understanding that CIGNA verified that it "has historically submitted claims data to Ingenix from four of its claims systems: Dentacom, Medicom, CIGNA Claims, and Proclaim. As of November 2007 and March 2008, CIGNA ceased submitting data from CIGNA Claims and Medicom, respectively, to Ingenix because these claims platforms processed very few claims. Beginning in November 2009, in addition to Proclaim and Dentacom, CIGNA began submitting claims data for claims processed on Power MHS." Power MHS is one of CIGNA's major claims processing systems.

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4 HIAA, the operator of the predecessor database, stated that these four data fields were selected because they were relatively easy for Data Contributors to submit. HIAA acknowledged they do not provide provider-specific, patient-specific, service-specific information about the charge.

With respect to its other claims process systems, CIGNA states that:

> "CIGNA does not submit data from the rest of its claims engines: single-site MHS, Amisys, MHC, CBH, PowerStepp (CIGNA Voluntary), Worldcare (CIGNA International) or Diamond 950 (CIGNA International). There are several reasons that CIGNA does not submit data from the remainder of its claims systems. First, CIGNA is not required by its contract with Ingenix to submit data from any particular claims system CIGNA sends data on a voluntary basis. Second, sending data from the remaining claims systems to Ingenix is not technologically practical. The four claims platforms from which CIGNA has historically sent data to Ingenix have capabilities that allow CIGNA to extract the data that Ingenix needs. Sending data from the remaining claims platforms would require considerable modifications to the claims platforms, and would also require CIGNA to develop an IT solution for extracting the data from those claims platforms. Third, when Ingenix customers send Ingenix a certain volume of data, Ingenix in turn provides those customers with a discount on data from the Ingenix PHCS database. CIGNA receives the maximum discount as a result of the data that it sends to Ingenix. Sending additional amounts of data would not result in any additional discount. Fourth, the claims platforms that CIGNA does not submit data from are minor claims platforms that only comprise a small fraction of the claims processed by CIGNA. Finally, based on the data that goes into the claims platforms, CIGNA has no reason to believe that sending data from Proclaim, CIGNA Claims, Medicom, Dentacom, and Power MHS, but not the remaining platforms, materially impacts the data it send to Ingenix"

Without production of the underlying factual or statistical evidence, CIGNA's claim that "sending all its data would not materially impact the data sent to Ingenix" cannot be verified. It should be noted that this statement is not justified by the mere fact that these claims are only a small percent of CIGNA's total claims. If the deleted claims are disproportionately high priced, and for CPT codes with few observations per zip code, a few claims could drastically change the percentile distribution and UCR estimate. Moreover, CIGNA only started contributing claims data to Ingenix from Power MHS (one of its two major claims engines) in 2009.

Similarly, in my supplemental expert report in Health Net dated June 15, 2006, I noted:

> "proper statistical procedures require that Ingenix assess the completeness and accuracy of the data it receives from its Data Contributors and ensure that its rules are being followed. A Data Contributor database cannot be considered valid when there is inadequate data quality control in place."

I have subsequently learned that in response to Ingenix's revised Data Submission Information form, although CIGNA certified that it "attests that the service zip code provided in service zip field (example: field #20 on Ingenix's recommended Record Layout) is populated with the zip code where services were rendered which is not necessarily the provider billing address zip code," Ingenix was aware as early as in 2001 that CIGNA could not supply the zip code where the service was rendered, but only the provider billing address zip code. Despite this, Ingenix used CIGNA data until 2009, when it discontinued using CIGNA data because of this problem.

I have also learned that, at some time, rather than submitting individual charges CIGNA submitted total charges and total number of occurrences to Ingenix for one of its claim processing data sets. Rather than discarding the data as useless, Ingenix considered the data as multiple charges, incorporating them all at the average. This approach obviously biases the UCR estimate down. For example, if there are only 10 charges in a zip code, and the charges average $100, Ingenix would consider these to be 10 individual charges at $100 each, and any charge in excess of $100 would be considered to be above the 80th percentile. However, the $100 average could be composed of five charges at $110 and five charges at $90; therefore, one-half of the charges would incorrectly be considered "atypical" of the charge distribution. To the extent that other contributors supplied aggregated data and Ingenix used the average values as it did for CIGNA, the methodology could actually seriously bias the distribution profiles used to compute R&C downward.

C. Guardian Violated Ingenix's Data Contribution Requirements

Guardian never contributed all of its available data. It produced no charge data relating to anesthesia procedures. Its Contributed Data was limited to certain CPT codes, and specifically excluded data relating to other CPT codes. Even as to the CPT codes it did contribute, Guardian failed to contribute provider-specific data fields (such as provider licensure, specialty, etc.) and patient-specific data fields (including the patient's age and gender). Except for three modifiers, Guardian's data excluded modifiers which were identified on the providers' billed charges.

D. Aetna Pre-Scrubs Valid High Charges

It is appropriate for a Data Contributor to edit out data errors. However, it is important that a Data Contributor does not pre-edit or pre-scrub out data to remove high charges which it labels "outliers." There are two reasons for this requirement. First, such pre-editing removes valid high charges and biases downward the Upper Percentile values in the collected data. Second, Ingenix's scrubbing process presumes and requires that the Contributed Data is not pre-edited or pre-scrubbed.

Aetna is Ingenix's largest data contributor. Its contributions to Ingenix are now 25% of the total data Ingenix receives. *See* Weil Gotshal letter dated December 17, 2009 to Aetna subscriber counsel. For at least two decades, Aetna has pre-edited or pre-scrubbed, its claims data according to its so-called Profiling rules. Aetna considers its Profiling rules mandatory. Aetna uses different Profiling rules according to whether a claim was processed by Aetna's automated adjudication ("AA") system or from manual claims processing (*i.e.*, after review by the medical review unit). The vast majority of Aetna's R&C determinations are made by its "AA" system. Aetna's AA Profiling rules state (in pertinent part):

> **"Charges that exceed prevailing will be reduced and not profiled with action codes 617 or 657.**
>
> **Charges that exceed prevailing but are within plan prevailing fee liberalization will be accepted but not profiled with action code 605"**
>
> Aetna's manual Profiling Guideline states (in pertinent part):
>
> **"Do not profile situations where Edit 410 displays – submitted charge is less than half the prevailing fee."**
>
> **"Do not profile situations where Edit 401 displays – submitted charge exceeds prevailing fee by 150%."**

Aetna's use of Profiling rules such as those quoted above significantly and adversely impact the integrity of the Ingenix databases. Aetna is a major data contributor, contributing hundreds of millions of charge records each year to Ingenix. Ingenix claims to base its data on 450 million claim records per cycle. Aetna's Contributed Data has been between 17-25% of the charges Ingenix has received since 2005. While Aetna contends that its Profiling rules did not automatically remove all claims in which the billed charge exceeded R&C from the data set it used to contribute to Ingenix (as well as create its own AMFS data), Aetna has nevertheless confirmed that it did use Profiling rules and that some charges were excluded based on the R&C value. While Aetna has yet to come forward with an adequate explanation and corroboration of how its Profiling rules applied over time, it is apparent that before Ingenix received the data, Aetna had pre-scrubbed the data using its internal Profiling rules. Aetna's pre-scrubbing of data compromised the integrity and accuracy of the data contributed to Ingenix. The combination of pre-scrubbing by Aetna and scrubbing by Ingenix ensured that the data gathered and compiled would be incomplete.

E. Ingenix's Fails to Insist on Compliance with Its Rules or to Audit its Data Contributors and Ignores Problems in Contributed Data Even When It is Aware of Them

Proper statistical procedures require that Ingenix assess the completeness and accuracy of the data it receives from its Data Contributors, and ensure that its contribution rules are being followed. A Data Contributor database cannot be considered valid when there is inadequate data quality control in place.

Despite the importance of Ingenix receiving all available "un-scrubbed" and market rate data (*e.g.*, excluding governmental payor data) from its Data Contributors, Ingenix took no steps to ensure that this occurred. Ingenix did not inquire or overlooked information as to how CIGNA, Aetna or other Data Contributors selected data, or whether they scrubbed it, or included non-market rate data. Aetna took from its interactions with Ingenix that it was free to pre-edit its data to weed out charges in excess of R&C. Significantly, Aetna informed Ingenix that it was pre-scrubbing its data using numerous Profiling rules. Ingenix did not inquire about these Profiling rules, and did not audit Aenta, but simply agreed to pretend that Aetna was submitting complete data. In fact, Ingenix agreed to change Aetna's certifications (which admitted non-compliance) to read "yes" instead of "no." Ingenix acknowledges that it is improper for Data Contributors to pre-scrub Contributed Data, but still took no steps to stop it, even when Aetna expressly informed Ingenix it was doing so.[5] Despite Ingenix's understanding that pre-scrubbing biases the data, Ingenix used Aetna's Contributed Data even though it had been pre-scrubbed and incomplete.

Even though its Data Contribution rules require submission of the entire universe of charge data, and Ingenix requires its Data Contributors to certify that they have submitted the entire universe of charge data, Ingenix knew that its Data Contributors (including CIGNA, Guardian and Aetna) continued to contribute less than all of their available data, pre-scrubbed their Contributed Data, and

5 It is both possible and likely that other Data Contributors are pre-scrubbing their Contributed Data prior to sending it to Ingenix. CIGNA, for example, could not state with certainty that it did not pre-scrub its Contributed Data.

failed to submit information for all required data fields. Yet Ingenix ignored, and continues to ignore, these clear violations of its stated policy and its Data Contributors' admittedly false certifications Neither Aetna, Cigna or Ingenix alerted data users that the previously compiled data violated its Data Contribution guidelines.

The following relevant chronology makes that clear:

1. Ingenix's pre-November 2004 contribution forms did not request, and Ingenix did not receive, Contributed Data reflecting the entire universe of provider data from its Data Contributors.

2. Commencing in November 2004, Ingenix changed its data contribution form to require each Data Contributor to certify that it was contributing the "entire universe of billed charges" and without alteration or pre-scrubbing.

3. Aetna, CIGNA and Guardian all signed the post-November 2004 certifications (as did other Data Contributors) despite continuing their prior practice of contributing less than the entire universe of billed charges from their claim systems.

4. Even when Aetna told Ingenix it was continuing to pre-scrub its data by using Profiling Rules, Ingenix accepted Aetna's pre-scrubbed data. Ingenix did not audit Aetna's contributions or assess the impact of Aetna's violation of Ingenix's stated rules. Ingenix did not take any steps to enforce its stated rules or inform data users that its Data Contribution rules were not being followed or enforced.

5. CIGNA also periodically advised Ingenix that its data did not differentiate between rendering provider (place of service) zip code and billing provider (place of billing) zip code. Despite CIGNA's demonstrated inability to report rendering provider zip codes, Ingenix did not

audit CIGNA and did not take any steps (at least until 2009) to ensure that its data was not being further compromised by CIGNA's noncompliant data.

6. Ingenix's attestation form and other certification requirements amount to meaningless gestures and failed to ensure statistical accuracy or compliance.

The collector of the data in a convenience sample is responsible for testing and verifying the data to ensure that it is not biased and to ensure that its convenience sample is in fact representative of the population of charges. Ingenix failed to properly insure that its rules were followed, and knowingly let CIGNA and Aetna (and presumably others) contribute data (which Ingenix then used) that failed to meet Ingenix's own rules and standards. Ingenix's agreement to let Aetna submit knowingly noncompliant data while changing the certifications to falsely indicate compliance is a striking example of knowing in the use of flawed and inadequate data.

II. INGENIX'S INVALID SCRUBBING METHODOLOGY (STEP 2)

A. Common Data Created by Merger of PHCS and MDR Databases

Ingenix merged the PHCS and MDR databases so that it uses a common data repository ("Common Data") used to create both MDR and PHCS data. The result of this merger is that both databases rely on Common Data. Ingenix applies the same edits and scrubs ("Common Scrubber") to the Common Data for both MDR and PHCS, and uses the same geozips for both MDR and PHCS, a change from prior years when different geozip groupings were used for MDR and PHCS. The MDR and PHCS final fee schedules differ as a result of differences in the final preparation of each database, after the Common Scrubber has scrubbed the Common Data. The PHCS and MDR 80th percentile values are different, despite Common Data and the Common Scrubber, because (i) PHCS reports "actual data" for some CPT codes in some geographic areas while MDR reports "derived" data for all CPT codes in all geographic areas; (ii) Ingenix uses

different methods of combining different CPT codes (*i.e.*, PHCS uses bodily systems to group CPT codes while MDR groups CPT code ranges); (iii) Ingenix uses different conversion factors (*i.e.*, relative values which measure the average level differences between charges among CPT codes) for MDR and PHCS Derived Data; and (iii) MDR uses an inflation factor to adjust data over time, while PHCS does not.[6] In creating Common Data, Ingenix uses MDR's grouping method and relative values.

B. <u>The Common Scrubber Used for Both MDR and PHCS</u>

MDR and PHCS are Contributor databases, meaning that the data used in them is entirely contributed by entities other than Ingenix. Data Contributors submit their data on tapes or disks, and transmit it to Ingenix. Ingenix then edits, or scrubs, the Contributed Data by contributor and computes the credit due to each contributor for submitting data for the PCHS database. Ingenix only gives credit for data that passes (*e.g.*, is not eliminated by) its scrubs. As I described in my prior report, Ingenix does an initial preliminary scrubbing to eliminate obviously invalid data entries. For example, Ingenix eliminates data with obvious keypunch errors (*e.g.*, a CPT code or a zip code which does not exist). This preliminary scrubbing is statistically proper and is not challenged.[7]

Ingenix uses other scrubs which create serious flaws. It groups together ranges of CPT codes and then subjects the Contributors' data to a method which scrubs and eliminates valid high charges

6 The difference in 80th percentile values in its two databases demonstrates that the R&C amount is sensitive to various data manipulations.

7 One of these preliminary scrubs was to eliminate all charges of $1 or less. Significantly, Ingenix eliminated this $1 charge scrub. Ingenix has chosen to rely on its low screen edit, inflating the number of charges eliminated from the low end. However, eliminating all charges of $1 or less from Medical and Surgical services as obvious data errors was a better procedure than relying upon a so-called statistical edit.

as "outliers" which are deemed "unreliable."[8] This method is inappropriate because it eliminates valid high charges.

The Common Scrubber reviews each data record contributed by the Data Contributor which has not already been eliminated (*e.g.*, because it contains modifiers).[9] The stated reason is that eliminated charges represent modifiers that would affect the way a provider bills. This procedure, by definition, means that this database cannot be used to assess the reasonableness of any medical charges submitted to an insurer with these modifiers. Charges associated with given CPT codes are grouped together based on numerical ranges of CPT codes. All charges for CPT codes within that CPT code range are combined and are subjected to a Common Scrubber formula.

In order to combine all of the charges for the different CPT codes within the CPT code range, Ingenix converts each charge by the relative value for that CPT code (*i.e.*, the adjusted or standardized data value is the actual charge divided by the relative value of its CPT code). The relative value is supposed to standardize (*i.e.*, account for) the differences in the average values of the charges among different CPT codes. This process, however, does not adjust for the spread from the mean of different procedures. All standardized charges in the CPT code range are then subjected to a high and a low formula. The two basic formulas to eliminate contributed data on the high end and low end, respectively are:

(i) **"Flag if charge is > RV x per 80 x hifct"**

(ii) **"Flag if charge is < RV x per 50 x lowfct."**

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8 Ingenix uses a Common Scrubbing Process on all the data contributed by data contributors to MDR and PHCS. According to Ingenix, there are only two minor exceptions where it does not do so, both with respect to the PHCS database.

9 Ingenix's Contributed Data includes charges originally billed with these modifiers. Some Data Contributors (including CIGNA and Guardian) contribute charge data but delete modifiers. They will be included in the database, whereas data with modifiers is excluded. Ingenix's failure to audit its Data Contributors or to effect proper quality control over the Contributed Data causes indiscriminate and inconsistent treatment of charges billed with modifiers. Charges with modifiers are thus improperly compared to charges which were compiled without modifiers.

Translated, the high formula (*i.e.*, (i) above) means that Ingenix eliminates a contributed charge if it exceeds the product of the relative value for that CPT code multiplied by the 80th percentile for the combined data in the CPT code range (the "per 80") multiplied by an arbitrary high factor number (hifct) determined by Ingenix[10].

The per80 and per50 values for a particular CPT code range incorporate the charge data for a broad range of CPT codes combined together, and adjusted for average value or "level" among the CPT codes, but not adjusted for the differences in the spread of charges within each CPT code (measured statistically by standard deviation from the mean). Not adjusting for the spread of charges means the formulas do *not* consider the distinct distribution of charges for any particular CPT code (*e.g.*, infrequent, less common procedures will have greater spread from the mean than more frequently performed simple procedures; procedures performed by different types of providers will have greater spread from the mean than those performed by a single type of provider, etc.). Ingenix's methodology rests on the assumption -- without proof or reason -- that the distribution of charges as to all CPT codes in the CPT code range is the same. In short, Ingenix uses relative values to standardize the data, but fails to account for their distribution as measured by standard deviations among charges in each CPT code range. Ingenix's failure to account for standard deviations is a fundamental error and will incorrectly eliminate valid high charges in those CPT codes, especially when the spread of charges differs among the CPT codes.

To illustrate this, consider the following hypothetical:

CPT Code 1: 1,000 charges, all $50 (relative value equals 1)

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10 The values of the high and low factors ("hifct" or "fee high" and "lowfct" or "fee low") that are used in the Common Scrubber formula are arbitrary. Very similar high and low factor values have been in use since 1992. Ingenix uses 1.95 as the high factor for all medical procedures; 1.8 as the high factor for all radiology procedures; 1.88 as the high factor for all laboratory procedures; and 1.9 as the high factor for all surgical procedures.

CPT Codes 2-10: 10 charges for each code, all with means of 100, but with significant variance in charges (relative value equals 2)

Assume the charges for CPT code 2 are as follows:

50, 50, 50, 50, 50, 50, 100, 150, 225, 225 (mean of 100)

Because of the numerical dominance of CPT code 1, the per 80 value for the entire range of CPT codes 1-10 will be $50. Thus, the Common Scrubber formula using a hifct of 1.95 will eliminate as unreliable outliers all charges for CPT codes 2 through 10 which exceed $195 (*i.e.*, 1.95 x 50 x 2). Specifically, all charges above $195 for CPT codes 2-10 will be eliminated, even though such charges are valid and not unusual for the particular CPT code. For example, for CPT code 2, the two $225 charges would be eliminated as unreliable (*i.e.*, because they exceed $195). They are eliminated even though they are valid charges, and are not unusual for the particular CPT code (*i.e.*, they reflect 20 percent of the charges).

The 10 charges noted above for CPT 2 ($50, $50, $50, $50, $50, $50, $100, $150, $225, $225) could reflect differences in provider qualifications. In other words, the $50 charges may reflect charges billed by a physician assistant, while the higher charges ($100, $150 and two at $225) may reflect charges billed by a medical doctors or medical specialists (*e.g.*, cardiologists). Elimination of the two $225 charges is incorrect and skews the data downward.

The Common Scrubber is applied without regard for provider specialty, training, experience, expertise or qualifications, such as whether a provider is a physician or not, and regardless of the type or place of service. As might be expected, higher priced charges within a CPT code may reflect such things as increased complexity, impaired patient health, or greater provider qualifications or experience. By combining charges for CPT codes, adjusting only for the difference in level and not

for standard deviation among charges for each CPT code, high charges which are valid and usual are regarded as unreliable outliers, and are eliminated from the Common Data, thereby skewing downward the Upper Percentile values in the final Ingenix data.

C. The Dental Data Example Proves Ingenix Systematically Understated R&C at the Upper Percentile Values

On August 24, 2001, Jill Faddis, a CIGNA subscriber, faxed questions to Carla Gee of Ingenix relating to her husband's R&C reimbursement for a dental procedure performed by a periodontist. The billed charge was $140 while the R&C reported by the PHCS database was less than half that amount ($65). The fax also included her survey of periodontists listed in the yellow pages giving their rates for the identical procedure codes (see Exhibit 14 Ingenix 00857). On October 31, 2001, Ms. Faddis sent a follow-up letter and survey, stating:

> "I have identified the problem. The dentists and periodontists are using the exact same codes for their service even though the service is not the same...It is obvious to me now that when Ingenix and other such data collecting companies comprise their data, they do so by looking at the codes and coming up with figures that represent the vast number of bills charged by dentists which far outweigh those bills charged by periodontists. This is an outrage and certainly not accurate."

She asked Ingenix to explain why the final Ingenix R&C amounts for two particular CDT codes were both $65 when her survey of billed charges by periodontists in her geographic area reflected higher charges than on the Ingenix data. (The surveyed charges for CDT codes 0140 and 0150 ranged from $110 to $163 compared to the PHCS 90th percentile of $65 for each CDT code.)

Ingenix reported that it had been incorrectly scrubbing out between 3-5 percent of charges, mostly from the high end. By eliminating charges for being "too high," Ingenix eliminated precisely the data it should be capturing. Even though Ingenix concluded that legitimate high charges had

been scrubbed by Ingenix's Common Scrubber, it did not undertake any further analysis of the data, or otherwise take any effort to remedy the elimination of valid high charges. [11]

It then restored the charges and recomputed the R&C. Even after adding back in the scrubbed out high charges, the 90th percentile value for D0150 only increased by $2, from $65 to $67. The 90th percentile value after Ingenix restored the scrubbed out high charges and re-computed the values increased 15 percent, from $65 to $75. Jill Faddis's survey demonstrates the inadequacy of the Ingenix data. For CDT D0150, Ms. Faddis's survey shows the following charges: $140; $125; $125; $163; $162; $162; $140; $110; $125; $130; $149. (Her periodontist charged $140.) Ingenix reported that its PHCS data for CDT code D0150 reflected charges ranging from $16 to a high of $125. Thus, 7 out of 11 periodontists charged *above* $125, the highest charge appearing in the PHCS data; 3 out of 11 periodontists charged $125, and only 1 out of 11 charged *less* than the highest charge ($110).

Ingenix reported that the charges for CTD code D0140 ranged from $16 to $120. For CDT D0140, Ms. Faddis's survey shows the following ten charges for periodontists in her area: $90; $90; $90; $103; $106; $106; $98; $60; $92; $100. The average charge in her survey for CDT code D1040 is $103.50. Moreover, nine out of 10 periodontists in Ms. Faddis's survey charged significantly *above the 90th percentile value* both before and after the scrubbed out high charges were restored.

There are various reasons why the 90th percentile still drastically understates the typical charge, even after correcting for the error in scrubbing out valid high data: *first,* Data Contributors (such as Aetna) may have pre-scrubbed out periodontist charges for this procedure from their Contributed Data, or may have simply failed to contribute all of the available claims data, such that

11 Although Ingenix became aware of this phenomenon, it failed to evaluate, track its impact on any other CDT or CPT codes or disclose or reimburse subscribers for the underpayments. As the producer of this data, Ingenix reneged on

most periodontist charges for these CDT codes were not submitted to Ingenix; *second*; the Insurers who manage the claims for the periodontists in these areas may not be Data Contributors; and *third,* because dentists bill the same CDT code but charge much less (i.e., $64 in Ms. Faddis's survey), and there are many more dentists than periodontists, the lower-priced dentist charges swamp the higher periodontist charges, skewing down the values even at the 90th percentile. (To the extent dental assistants and other ancillary providers are able to bill for CDT 0150 or CDT 1040, this phenomenon will be even more pronounced.) The end result is that the Ingenix data skewed the Upper Percentile values downward.

The same phenomenon illustrated by Ms. Faddis's survey of periodontists and dentists occurs for all types of procedures in all geographic areas. This data confirms my opinion that by failing to collect all available data (by pre-scrubbing or otherwise), by scrubbing out valid high charges, and by indiscriminately combining charges from various types of services without any consideration of provider qualifications or the type of service provided (within the CPT code), Ingenix understates the Upper Percentile values in the Ingenix databases.

C. The Scrubbing of High Charges is Not Balanced Out by Scrubbing Low Charges, and Biases the Data

As I discussed in my prior report, Ingenix's scrubbing of some charges on the low end is not balanced by its scrubbing of charges on the high end. Even if Ingenix edits out more low than high charges, the scrubbing of high charges still skews the database downward.

its responsibility to ensure data quality at all steps during the process.

Assuming that the statistical edits were equally likely[12] to remove valid high and valid low charges, the result would bias the Upper Percentile values downward. Even removing many more valid low charges than valid high charges may not offset the effect of removing high charges and biasing the Upper Percentiles downward.

This fact is illustrated by the following hypothetical case: Consider a case in which we have 100 valid observations in rank order, so the 80th observation is the 80th percentile. All the observations represent valid charges. Suppose we eliminate the top 20 percent of the observations through pre-screening (as Aetna does) or scrubbing of the data. As a result, the 100th percentile of the screened data is what had been the 80th percentile, which is the true 80th percentile. No matter how many low values are pre-screened out (assuming, of course, that some data remains after scrubbing) the reported 80th percentile will be lower than the true 80th percentile, since the true 80th percentile will always be the reported 100th percentile.

Similarly, consider the following hypothetical example: 100 charges are numbered consecutively between 1 – 100. As a result of the editing, assume that all 10 charges between 91 and 100 are deleted from the high end, and all 30 charges from 1-30 are deleted from the low end. This hypothetical thus assumes that Ingenix is scrubbing out three times as many low charges (30) as high charges (10). Even so, the elimination of one-third as many high charges still skews the 80th percentile value downward.

After scrubbing the 30 charges from the low end and the 10 charges from the high end in this hypothetical, 60 charges remain, from 31-90. The 80th percentile of the scrubbed charges is 78

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12 Given that one would expect the percent distribution of charges to be skewed to the right (larger values) (*i.e.*, it is more likely to see a valid charge twice the mean charge than one-half the mean charge), one would expect more high valid charges than low valid charges to be incorrectly removed.

(.8*60+30). Thus, even where Ingenix edited out three times as many low charges as high charges, the statistical effect of removing high charges is to skew the database downward. .

III. PUBLICATION AND ANALYSIS OF FINAL FEE SCHEDULES (STEP 3)

Only the Common Data that the Common Scrubber does not eliminate is used to create the final Ingenix database fee schedules.

A. PHCS Actual Data

Ingenix creates PHCS fee schedules by taking the Common Data that the Common Scrubber did not eliminate for each CPT code, with only minor exceptions. If there are nine or more occurrences (*e.g.*, charges), then Ingenix considers the data to be "actual data" and reports the actual data at each percentile (*i.e.*, 50th, 60th, 70th, 75th, 80th, 85th and 90th along with the mean and the mode charges.) The PHCS database reports "actual" data for only 10 percent of all CPT codes, and derives data for approximately 90 percent of all CPT codes. Ingenix states that 90 percent of the Contributed Data is attributable to 5 percent of CPT codes, leaving an insufficient number of "actual" charges for the vast majority of CPT codes.

B. PHCS Derived Data

Ingenix derives data for PHCS for each CPT code in which fewer than nine charges passed the Common Scrubber for that geographical area (geozip). Ingenix groups together broad CPT ranges into a bodily system. (There are 15 surgical, 15 anesthesia and 26 medical service bodily systems.) For example, Ingenix considers all CPT codes from 40490 to 43499 to be in the same bodily system ("upper digestive system"). There is wide diversity among these CPT codes, ranging from the simple repair of lip (CPT 40490, rv of 5.50) to the very complex (esophagectomy, CPT 43116, rv of 240). The data that passed the Common Scrubber for all CPT codes in a bodily system in the

geographic area is used to derive the data for the CPT codes in each bodily system with fewer than 9 charges. To create the 80th percentile for a CPT code with fewer than 9 reported charges, Ingenix first computes the 80th percentile for charge data from all CPT codes within a bodily system and area. In order to combine across different CPT codes within a bodily system and area, Ingenix adjusts each charge using the RVs from Relative Value Studies, Inc. ("RVSI"). That is, each charge is divided by RVSI's RVs (these RV values are different from those used in the scrubbing process) and referred to as "converted" charges. That is, if one CPT has a relative value of 2 and another has a relative value of 4, the average cost of charges in the second CPT is twice (4/2) that of the first.

The 80th percentile value for the adjusted charge data for the bodily system is then calculated. This is referred to as the "converted 80th percentile." This value is then used to derive the 80th percentile value for all CPT codes with fewer than nine observations in the same bodily system and area. This is done simply by reconverting the converted 80th percentile to adjust the average level of the specific CPT code that the derived data represents. Specifically, the derived 80th percentile for the CPT code would be the converted 80th percentile for its bodily system times RVSI's RV for that CPT code. Ingenix uses the same method to derive each percentile for each CPT code in that bodily system and area in which fewer than nine data points pass Ingenix's scrubbing process.

C. MDR Reported Data

Ingenix derives MDR data from the Common Data using the same methodology as for the PHCS derived data. Ingenix uses different relative values, and combines different ranges of CPT codes, but the methodology for deriving data between MDR and PHCS is the same.

The CPT code book groups together CPT codes for a procedure from the simplest to the most complex. Sequentially numbered CPT codes, therefore, reflect both simple and far more complex

procedures. Ingenix states that it wanted to change its current system to use more similar, non-contiguous, non-sequential CPT code ranges. Despite this recognition, Ingenix has only used this method to calculate conversion factors in its HCPCS database and not for its other databases (medical/surgical, anesthesia, dental, etc.).

This process of combining CPT data together to conduct analyses and then breaking the results back out to specific CPT codes is similar to what Ingenix does in its Common Scrubbing process. Just as with the Common Scrubber, Ingenix's process for computing derived data for both MDR and PHCS Derived Data assumes that the distribution of charges among all CPT codes in a bodily system are the same, and fails to account for standard deviations in the charges for each CPT code.

D. The Methodology For Creating Derived Data for CPT Codes with Fewer Than Nine Occurrences Is Statistically Invalid, and Biases Downward the Upper Percentile Values for PHCS and MDR Data

The key to combining data across a range of CPT codes is standardization of the charge data. Proper standardization enables the meaningful combination and comparison of charges across different CPT codes. When combining data across a range of CPT codes, Ingenix must standardize the data to account for the differences in the level and spread of charges among CPT codes. Data standardization by level and spread is a common issue for statisticians.

There are proper well-known statistical methodologies for combining data with different means and variances. For example, if the data in each CPT code had been standardized by its relative mean and relative standard deviation, the data could be combined and then unwound by reversing the process. Assuming adequate and proper data (a requirement not satisfied in either

MDR or PHCS), such a methodology could estimate each CPT's percentile distribution from the combined data.

By proper standardization, considering differences, both the relative levels and the relative standard deviations, the 80th percentile value in one CPT becomes equivalent to the 80th percentile value in every other CPT code, and all the combined data is comparable. However, if one standardizes only for level, the only combined values that are actually comparable are the average values. Since R&C involves knowing the Upper Percentiles, all the combined data must be comparable, unbiased estimates of the Upper Percentile values.

Ingenix, however, standardizes only for level by using the RV. For example, if the charges in CPT code 1 are, on average, twice that of those in CPT 2, then the charges in CPT code 2 are simply doubled (or conversely, those in CPT code 1 are divided in half). Then, Ingenix groups them and the difference in the average level of charges between the two CPT codes is accounted for in the combined charge data.

Because Ingenix fails to consider that some CPT codes have a wider distribution of charges (*i.e.*, standard deviation) than others, the derived percentiles understate the true higher percentile value for these CPT codes. This is a particularly significant problem because those CPT codes with a large number of cases tend to be the most common and to have the smallest standard deviation, while the CPT charges with a lower frequency of charges tend to have a greater standard deviation.

That is, Ingenix's flawed method of combining data without proper standardization groups together data relating to numerous procedures so that the more common, less expensive procedures, which typically have little variation, will dominate in number compared to the more specialized and less common CPT codes. As a result, when the data is combined based only on the relative value of

charges, almost any charge above the mean in the less common CPT codes with a higher relative standard deviation can appear to be unusually high.

Consider the following simplified hypothetical:

[Note: The underlined value is the 80th percentile of each distribution.]

CPT 1: charges 9, 9, 10, 10, 10, 10, 10, 10, 11, 11 Average = 10
CPT 2: charges 50, 50, 50, 100, 100, 100, 100, 150, 150, 150 Average =100

Combining
the two CPT codes using RV of 10 for CPT 2 yielded:

5, 5, 5, 9, 9, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, 11, 11
15, 15, 15

Thus, the combined 80th percentile is 11, which translates back to 11 for CPT1 (11 x RV of 1) and 110 for CPT2 (11 x RV of 10). Therefore, the three 150 charges in CPT2 (which are actually the 70th percentile for CPT 2) are now classified as being above the 80th percentile for the combined data set.[16] By failing to account for the standard deviation in the charges for CPT2, Ingenix's methodology skews the 80th percentile value downward from 150 to 110.

Also, consider the following hypothetical:

Hypothetical

CPT 1			CPT 2		
RV = 1			RV = 2		
Charge	Adjusted Charge	Frequency	Charge	Adjusted Charge	Frequency
	(1)	(2)		(1)	(2)
150	150	79	220	110	4

16 Note: the "converted" 50th percentile is 10, which correctly translates back to 10 (10 x 1) for CPT code 1 and 100 (10 x10) for CPT code 2.

160		160		21		300	150	2
152		152		Avg. Chg.		380	190	2
						400	200	2
						304	152	Avg. Chg
CPT 3 RV = 3						CPT 4 RV = 4		
Charge		Adjusted Charge (1)		Frequency (2)		Charge	Adjusted Charge (1)	Frequency (2)
330		110		2		490	123	2
450		150		1		647	162	6
570		190		1		608	152	Avg. Chg
600		200		1				
456		152		Avg. Chg				

Value	All Adjusted Charges Frequency
	(1)
110	6
123	2
150	82
160	21 80th Percentile
162	6
190	3
200	3

In this hypothetical, 80 percent of the charges in CPT code 4 and 20 percent of the charges in CPT codes 2 and 3 would incorrectly be deemed to be unreasonable, based on using the incorrect derived 80th percentile as the R&C value.

VI AETNA's USE OF ITS OWN DATA OR MEDICARE TO DETERMINE R&C

In instances where Ingenix actual data in a particular geographic area was not available, Aetna's internal policies dictate that Aetna could use Ingenix national data (both actual and derived). Clearly an unadjusted national number cannot satisfy the geography-specific definition of R&C.

In instances where no Ingenix data was available, Aetna used other data to determine R&C amounts. For example, Aetna used its internal data to create what it referred to as Aetna Market Fee Schedule ("AMFS") data. Just as with the data it contributed to Ingenix, however, the AMFS data was pre-scrubbed using Aetna's Profiling Guidelines and so it edited out valid high data that should have been captured and reflected (but was not) in AMFS.

In other instances, Aetna used a percentage of Medicare to determine R&C. For example, in some instances Aetna used 125% of Medicare, and in others it used 75% of Medicare. However, Medicare is a budget-driven number and does not, and cannot, satisfy Aetna's definition of R&C. Thus, using Medicare data to define R&C is statistically invalid.

VII CALCULATION OF UNDERPAID PLAN BENEFITS

Assuming Aetna maintains historically its electronic database which processed claims Aetna should be able to calculate and reimburse underpaid plan benefits resulting from use of the Ingenix database or other invalid R&C payment using its computerized system to reprocess claims by subtracting the invalid R&C payment from billed charges.

CONCLUSION

After reviewing Ingenix's methodology (including data contribution editing and deriving percentile calculations), I conclude that the Ingenix databases are invalid for use by Aetna to determine R&C. Aetna's use of outdated data and of its own internal data or a percentage of Medicare are also invalid methods to determine R&C.

Dated: Philadelphia, PA
April 6, 2010

Bernard R. Siskin, Ph.D.

Exhibit 8

ATTORNEYS' EYES ONLY
ATTORNEY-CLIENT PROTECTED

UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

IN RE: AETNA UCR LITIGATION	MDL No. 2020
This Document Relates to: ALL CASES	Master Case No. 07-3541 (FSH) (PS)

EXPERT REPORT DATED August 9, 2010

Bernard R. Siskin, Ph.D.

Director and Head of the Labor Practice Unit of LECG
Philadelphia, PA

I. INTRODUCTION

I am submitting this Expert Report relating to Aetna's use of the Ingenix database to determine Usual, Customary and Reasonable ("UCR" aka "R&C") amounts. I have opined about the flaws in the UCR databases in the expert reports dated March 31, 2004 (HIAA) and June 15, 2006 (Ingenix) submitted in the *McCoy v. Health Net* case before this Court. On April 10, 2008, I appeared before the Court in the *McCoy* matter to explain the basis for my conclusions that Ingenix data is flawed and should not be relied on for R&C benefit determinations. On April 6, 2010, I submitted an expert report in this matter. I incorporate that report, as well as my prior reports and testimony to this Court, in this report.

I have been retained as an expert witness on behalf of plaintiffs ("Plaintiffs") to provide an analysis of the Ingenix Databases, including the Prevailing Healthcare Charge System data and databases ("PHCS Database") and the Medical Data Research ("MDR") database (collectively, "Ingenix Databases") used by Aetna to determine R&C amounts for its subscriber members who have received services from non-participating medical providers (*i.e.*, those who have not agreed to accept Aetna's contracted amount as payment in full). It is my opinion that the Ingenix Databases suffer from fundamental flaws that make them invalid for calculating R&C benefits in compliance with plan terms.

II. EDUCATION AND PROFESSIONAL QUALIFICATIONS

I am a Director of LECG and work in the Philadelphia, Pennsylvania office. I received my Ph.D. in Statistics with a minor in Econometrics from the Wharton School of the University of Pennsylvania in 1970. Upon graduation, I became an assistant professor at Temple University in Philadelphia, Pennsylvania. I served as Chairman of Temple University's Department of Statistics for five years. I remained at Temple until 1984, when I resigned my tenured professorship position.

Since receiving my Ph.D., I have specialized in the application of statistics in a forensic setting. Much of my professional experience over the past thirty years has involved analyzing data and evaluating whether data are appropriate and sufficient for inferential analysis. I have written on the proper use, reliability and validity of databases (also known as data sets) for particular applications and have lectured widely on these topics. I have been retained by several courts, governmental agencies, states and private organizations to evaluate and/assess a wide variety of databases. These institutions include: the Third Circuit Task Force on Equal Treatment in the Courts, the National Aeronautics and Space Agency (NASA), the United States Justice Department,

the Central Intelligence Agency, the Federal Bureau of Investigation, the Environmental Protection Agency, various states such as New Jersey, California, Connecticut, and Alaska, and numerous municipalities such as New York, Chicago, Philadelphia and Akron, along with numerous private corporations such as: Automatic Data Processing, Amerihealth, McKesson, Lafarge, Merck, Rohm & Haas and Washington Mutual.

III. FEDERAL COURT CERTIFICATION AS AN EXPERT

I have testified in more than 100 cases on the issue of the application and use of statistical evidence. The analyses I have conducted have involved allegations regarding the presence or absence of statistical reliability in data sets. I have also been appointed by courts as a neutral, jointly-agreed-upon expert to undertake specific statistical analyses. My curriculum vita is annexed as Attachment 1.

IV. EXPERTISE

I am an expert in statistics: the science of collecting, classifying, presenting and interpreting numerical data; the analysis of data and the limitations of what can and cannot be properly inferred from data.

V. INFORMATION CONSIDERED IN FORMING MY OPINIONS

In forming my opinions, I have reviewed the materials referred to in my prior reports (dated March 31, 2004 and June 15, 2006) as well as the following categories of documents: Aetna-specific policies and procedures relating to R&C including discussions among claims personnel; R&C training materials; materials related to use of Aetna's internal data or outdated data or a percentage of Medicare or Tiering Methodology; Documents relating to profiling, including profiling guidelines and internal discussions about their use; Deposition testimony excerpts

including from Ingenix personnel (Carla Gee) and Aetna personnel (Deborah Justo, Francis J. Traceski, Antonio Rocchino and Dr. James Cross) and certain interrogatory answers.

Weil Gotshal letter dated December 17, 2009 to Aetna subscriber counsel listing the number of records and the percentage of Aetna's data contribution to Ingenix.

Documents identified in this report or in my prior report.

VI. DISCUSSION

A. Overview

Aetna defines R&C in relevant part as:

> Only that part of a charge which is reasonable is covered. The reasonable charge for a service or supply is the lowest of:
> - the provider's usual charge for furnishing it; and
> - the charge Aetna determines to be appropriate, based on factors such as the cost of providing the same or a similar service or supply and the manner in which charges for the service or supply are made; and
> - the charge Aetna determines to be the prevailing charge level made for it in the geographic area where it is furnished.
>
> In determining the reasonable charge for service or supply that is:
> - unusual; or
> - not often provided in the areas; or
> - provided by only a small number of providers in the area;
>
> Aetna may take into account factors, such as:
> - the complexity;
> - the degree of skill needed;
> - the type of specialty of the provider
> - the range of services or supplies provided by a facility; and
> - the prevailing charge in other areas.

American Psychiatric Ass'n, Certificate of Coverage, Eff. 01/30/06, AET-C 0000995-1048 at AET-C 0001038-39. The definition in the plan above identifies certain of the core concepts and

factors necessary for developing an R&C standard. Aetna's form letter to its members interprets "usual and prevailing fees" to include the factors enumerated in the subscriber plans:

> Aetna makes payment based on:
> · the provider's reported services;
> · the prevailing fee;
> · member eligibility and
> · all other plan provisions and limits, including co-pays, co-insurance, and deductibles at the time services are rendered.
>
> When determining the usual and prevailing charge, Aetna considers
> · the type of service or supply that was provided;
> · the skill required or complexity involved;
> · the specialty of the provider; and
> · the prevailing charge level made for the service or supply in the geographic area where it is furnished.
>
> In order to determine the prevailing charge level, Aetna refers to statistical profiles of physician charges for the same or similar services in a geographic area. An independent vendor collects and maintains these charges and Aetna update s the profiles in our claim processing systems every 6 months.
>
> In evaluating whether to allow reimbursement above the normal fee, Aetna reviews material submitted with the claim or the appeal, including:
>
> · written documentation that outlines the unusual circumstances or complexity of the care; and
> · the provider's normal fee for this service when there are no unusual circumstances or complexity for the procedure in question.

AET-00618485. These form documents demonstrate that when determining the R&C amount, Aetna interprets "the prevailing charge level" to require comparison to "other providers' charges . . . in the geographic area where the service is provided." AET-00714123; Cooper AET 00511 ("an amount which is most often charged for a given service by a Provider within the same geographic area").

In its Frequently Asked Questions About R&C, Aetna provides scripted responses to probable questions about R&C in all of its plans. For example, in response to the question, "What does Aetna consider when determining the Usual and Prevailing charge?," the response is:

> Aetna considers
> · the type of service or supply that was provided
> · the skill required or the complexity involved
> · the specialty of the provider, and
> · the prevailing charge level made for the service or supply in the geographic area where it is furnished.

AET-00618481. Thus, Aetna construes its own plans to require it to consider certain core factors when determining R&C.

If Aetna is to determine R&C consistent with the plan definition and documents sent to its members, it must have a database that allows it to assess these core concepts and factors. These include factors such as the cost of providing the same or a similar service or supply and the manner in which charges for the service or supply are made; the prevailing charge level made for it in the geographic area where it is furnished; whether the service is unusual; not often provided in the areas; provided by only a small number of providers in the area; the complexity; the degree of skill needed; the type of specialty of the provider; the range of services or supplies provided by a facility; and the prevailing charge in other areas. I will refer to these factors as "Aetna Plan Definition Factors" or "core concepts." Ingenix collects and reports minimal information: the CPT code, date of service, geozip and charge. It does not collect or consider any of the information required by Aetna's R&C definition. Aetna primarily relies upon the Ingenix databases to determine R&C. However, the Ingenix databases do not allow one to consider and assess the core concepts and factors which must be considered in determining R&C. In some circumstances, Aetna uses other data (*i.e.,* either its own database, the Aetna market fee schedule, the Medicare

reimbursement rates, or the Tiering Methodology). These databases also fail to capture data relevant to the core concepts and factors necessary to determine R&C.

Dr. James D. Cross, the Head of National Policy and Operations at Aetna, testified that factors including provider specialty and board certification are properly considered in determining a provider's fee.

> Q. Does board certification have anything to do with reasonable and customary determinations by Aetna at all?
>
> MR. SIGLER: Object to form. Go ahead.
>
> A. Not as it relates to physicians and what their degree is as an M.D., D.O. There is no qualification by what specialty or board certification as it relates to their usual and customary reimbursement. The difference for board certification and credentialing and specialty designation occurs on the contracted side of our relationship with providers. . . . And in fact, if they are a more specialized individual or they have a market share that they can control more in that particular market than others, the negotiation may imply that it's necessary to pay them more for their services than somebody else in that community.
>
> So when we are negotiating fees, that's where specialty, board certification, the market, other factors come into play as to recognizing whether they command a higher reimbursement.
>
> On the reasonable and customary side of a nonparticipating provider, there is no credentialing and there is no differentiation between their specialty.

Cross Dep. Tr. 107:20-108:24, Mar. 23, 2010 (emphasis added). This confirms my opinion that factors such as provider specialty and board certification affect the Reasonable & Customary charge, but are not considered by the Ingenix Databases.

Significantly, Aetna uses the Ingenix Databases to automatically determine R&C value through its automated processing system, thereby disregarding the plan terms. AET-04005349-51; *see also* AET-00462524-26 ("The Ingenix data is the primary source for R&C / RCL based benefit determinations."); AET-00063403 ("Aetna determines Reasonable and Customary (R&C) fees by using the provider charge data from Ingenix PHCS. . . ."). Aetna's Head of National Medical Policy and Operations, Dr. James Cross admitted that: "Since 2001, the vast majority of Aetna's claims have been auto-adjudicated, without involvement of a manual claim processor." Dr. James Cross Decl., June 30, 2010, at ¶ 83. Therefore, Aetna's auto-adjudication process does not consider the plan terms before automatically processing nonpar claims.

Further, Ingenix's 30(b)(6) representative Carla Gee testified that Ingenix "will not opine as to whether or not our database meets the policy language," *i.e.* Aetna's plan terms. Rather, the insurance company using Ingenix must determine whether the Ingenix Database meets its "policy . . . language . . . for defining reasonable [and] customary." Gee Dep. Tr. 375:23-376:23, Mar. 18, 2010.

> Q. When Ingenix performs database support functions or litigation support…do the Ingenix personnel vouch for the accuracy and comprehensiveness of the Ingenix data?
>
> A. …Ingenix will not opine as to whether or not our database meets the policy language or the state mandate,…Ingenix will not opine on what is reasonable or usual or customary or whatever the language may state. That is determined by the insurance companies or the carriers who are using our data to see if our benchmarking databases meet their criteria for defining reasonable or usual or customary, whatever language is in their policy or state mandate.

Id. (emphasis added); *Id.* at 373:13-374:7. Carla Gee's point is that in order to determine R&C, one must consider the plan terms.

Carla Gee further testified that the Ingenix database does not determine the total population of providers; or the percentage of providers it captures for CPT codes in a geozip or the number of providers making a charge. The R&C value may have reflected the charges of a single provider. Gee Dep. Tr. 343:18-344:3, Apr. 21, 2005; Gee Dep. Tr. 147:21-148:11, 162:21-163:14, Apr. 6, 2005. It is not possible to determine how many different providers' charges were used (or not used) in compiling the Ingenix database because Ingenix did not collect provider-specific data. Gee Dep. Tr. 73:21-74:19, 78:17-79:4, Mar. 17, 2010. "The Ingenix outputs are not specific to [the] provider." Gee Dep. Tr. 371:18-372:14, Mar. 18, 2010. Ingenix does not capture the specialty, training, experience, certification, education or licensure of providers. Gee Dep. Tr. 357:1-14; 395:15-397:3, Apr. 21, 2005. Ingenix does not consider or report the place of service which can affect the amount of the charge. Gee Dep. Tr. 260:25-261:8, Apr. 7, 2005; Gee Dep. Tr. 70:6-15, Apr. 6, 2005. Nor does Ingenix account for patient-specific factors, such as age and health status. Gee Dep. Tr. 369:16-19, Mar. 18, 2010.

Aetna and United Healthcare (a co-defendant in Aetna) also produced three experts. None of these experts offered any evidence or opinion that the Ingenix database could be relied upon for setting valid amounts for R&C. United Healthcare and Ingenix's expert, Dr. Daniel J. Slottje, testified he had "no opinion" as to whether "Ingenix, PHCS, or MDR databases set forth a reasonable and customary charge either actual or derived." Dr. Daniel Slottje Dep. Tr. 158:17-22, May 5, 2010. Aetna's expert Dr. Joskow did not endorse or offer an opinion on Aetna's use of Ingenix for determining R&C: "I am not providing any opinion regarding whether – as a theoretical

or legal matter – it is 'right or wrong' for Aetna to have used data compiled in this way." Dr. Andrew S. Joskow Expert Rpt. at 26, 32, Apr. 6, 2010. Aetna's expert Dr. Robin Cantor stated: "My analysis does not address in any way how Aetna used the unmodified output of the Ingenix Database to pay ONET claims during the class period." Dr. Robin Cantor Expert Rpt. at 5, Apr. 6, 2010.[1]

Thus, neither UHC, Ingenix nor Aetna offered any expert opinion that the Ingenix database contains the data necessary to assess the core concepts and factors and which could be used to determine R&C. Indeed, the Ingenix database is published with a disclaimer stating that its data, whether actual charge or derived charge, does not reflect or determine R&C.[2]

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1 Similarly, CIGNA's expert, Dr. Monica Noether, also declined to opine on the validity of the databases. Noether Dep. Tr. 217:21-218:3, June 23, 2010.

2 Ingenix publishes both the MDR and PHCS data with the following disclaimer:

> "Client is responsible for decisions made and actions taken based on the database. The database is designed and intended for use by professionals experienced in the uses and limitations of claims processing, and it is client's responsibility to ascertain the suitability of the database for client's purposes. The database is provided for informational purposes only and Ingenix disclaims any endorsement, approval, or recommendation of data in the database." Gee Ex. 12 (PHCS); Ex. 39 (MDR).

Ingenix's Product Schedule agreement prior to 2005 stated:

> "The Data is provided to Customer for informational purposes only. Ingenix disclaims any endorsement, approval or recommendation of particular uses of the Data. There is neither a stated nor an implied 'reasonable and customary' charge, either actual or derived; neither is there a stated nor an implied 'reasonable and customary' conversion factor. Any interpretation and/or use of the Data by Customer is solely and exclusively at the discretion of Customer. Customer shall not represent the Data in any way other than as expressed in this paragraph." PHS 7009738.

In April 2005, Ingenix's Product Schedule agreement reflected the additional italicized language:

"The Data is provided to Customer for informational purposes only. *Customer acknowledges that the Data is a tool that Customer may use in various ways in its internal business.* Ingenix disclaims any endorsement, approval or recommendation of particular uses of the Data *either in general or with respect to Customer's operations. The Data does not provide to Customer* a stated or an implied 'reasonable and customary' charge, either actual or derived. *The Data does not contain* a stated nor an implied 'reasonable and customary' conversion factor. Any *reliance upon,* interpretation *of* and/or use of the Data by Customer is solely and exclusively at the discretion of Customer. *Customer's determination or establishment of an appropriate reimbursement level or fee is solely within Customer's discretion, regardless of whether Customer uses the Data. Ingenix does not determine, on Customer's behalf, the appropriate fee or reimbursement levels for Customer and its business. Customer acknowledges that Ingenix sells both the MDR and the PHCS relative and actual charge databases, and that Customer has decided to license the PHCS database.* Customer shall not represent the Data in any way other than as expressed in this paragraph." PHS 7108744.

Under Aetna's plan definitions, to assess a reasonable charge for a particular medical service, one must rely on actual charges billed by similar providers for reasonably similar services performed in a relevant geographic area. In order to determine the set of reasonably similar services, the database would need to contain information on the Aetna Plan Definition Factors and others that one would expect to affect the cost of the services, such as: (i) significant differences in provider qualifications, (ii) significant differences in type of medical service provided, and (iii) significant differences in medical market area. Given this information, one could then determine which charges are reasonable and which are "too high." A review of the Ingenix databases shows that they do not (and cannot) satisfy the core concepts of reasonably similar provider qualifications, medical services rendered and medical market area in which the service is performed. In sum, the Ingenix Databases do not allow one to compute a distribution of charges which either satisfy the plan definition or are sufficiently similar that one can reasonably assess which charges are reasonable and which charges are "too high."

B. Methodology Review

In evaluating the Ingenix Databases, I considered the following general principles:

1. the stated purpose for the data (*e.g.* any relevant or other definition);

2. the data collected and the manner of its collection;

3. the data not collected and the reasons therefore;

4. the steps taken to ensure the accuracy, comprehensiveness and completeness of the data collected;

5. the editing of the data, if any, and whether such editing impacted the resulting distribution of the data and its validity;

6. the end use for the data, and whether the data necessary for such end use have been collected; and

7. whether any biases (distortions) were introduced at any point in the methodology.

VII. OVERVIEW

A. Ingenix Uses Flawed Methodology (Data Contribution and Processing) to Create the MDR and PHCS Databases

In 2000-01, Ingenix consolidated the MDR and PHCS databases and the data contribution and screening (editing) process (*i.e.*, "scrubbing") used to create them. I explain in this report how these databases share a flawed underlying methodology (including both data contribution and editing), which skews downward the amounts reported by the Ingenix databases for the percentiles at and above the 70th percentile ("Upper Percentiles"). As I note, these methodological flaws affect all CPT codes in all geographic areas. More significantly, the data reported does not consider: the cost of providing the same or a similar service or supply; the manner in which charges for the service or supply are made; the prevailing charge level made for it in the geographic area where it is furnished; whether the service is unusual; not often provided in the areas; provided by only a small number of providers in the area; the complexity; the degree of skill needed; and the prevailing charge in other areas; any differentiation of services provided within a CPT code; patient age or health and conditions; patient's prior medical history; the provider's qualifications, credentials, specialty, training or experience; and the place of service (hospital, clinic or doctor's office); or the range of services or supplies provided by a facility.

The first step in Ingenix's methodology is the collection of data from voluntary Data Contributors ("Step 1"). The data it receives is a convenience sample. Ingenix fails to ensure that the convenience sample is representative of the population of charges. It fails to ensure the

Contributed Data contains the fields it requested, is not pre-edited to remove high charges, does not contain non-market charges, and reflects each Data Contributor's complete population of relevant charges. It then edits or "scrubs" (*i.e.*, deletes) the data using a "scrubber" prior to analytical processing ("Step 2"). Ingenix's scrubbing is inappropriate for two reasons. First, it uses formulaic edits to identify purported statistical outliers and automatically removes them without factual basis or further investigation to determine if they are truly incorrect data points (and should be removed) or are simply high (or low) charges that should not be removed. The incorrect removal of valid charges, even if removed from both the high and low ends, generally biases the Upper Percentile values downward. If an equal number of valid charges are deleted from the high and low ends, the Upper Percentiles will be biased downward. Even if more valid low charges than valid high charges are removed, the Upper Percentiles will most likely be biased downward. For example, if Ingenix removes just 5 percent of total valid charges from the high end, it would have to remove 4 times that number, or 20 percent, of total charges from the low end before the 80th percentile data element in the "scrubbed" data is the actual 80th percentile of all the valid charges. Secondly, Ingenix's scrubbing combines the charges for a broad range of CPT codes without adjusting for differences in the spread of charges between CPT codes (*i.e.*, the "standard deviation"). This flaw tends to remove valid high data points, particularly in CPT codes having a wide variation in charges (*e.g.*, because different types of providers are billing the same CPT code). This would bias the Upper Percentile values downward.[3]

Another fundamental flaw in the PHCS sample is that the basic unit of measurement is incorrect. Provider-specific information is not being collected, patient-specific information is not

3 The observation noted as the 80th percentile will not be the actual 80th percentile observation. The reported 80th percentile observation will be below the actual 80th percentile. However, its charge value would be

being collected and procedure-specific or place-specific information is not being collected. Thus, specific provider charges are not studied. By way of simple example, consider the following hypothetical: five providers in a particular locality submit charges of $60, $70, $80, $90 and $100, respectively, for a specific procedure. On a provider basis, $90 is the 80th percentile. PHCS, however, determines R&C based on charges. Suppose that there are 100 charges from the $60 provider; 60 charges from the $70 provider, 20 charges from the $80 provider, 15 from the $90 provider and 5 from the $100 provider. Based on these charges, the 80th percentile would be $70, not $90. That is, the result would appear to indicate that R&C is $70, but the determinations of the R&C is premised on the total number of charges collected, not the usual charge of specific providers for specific procedures.

The third and final step is the analysis and publication of the scrubbed data ("Step 3"). Ingenix produces MDR and PHCS data for each three-digit zip code area in the nation. The PHCS database calculates and reports the percentile distribution of reported charges for individual CPT codes having at least nine occurrences in the final database. For CPT codes for which fewer than nine charges are reported, the PHCS database reports a "derived" percentile distribution of charges. PHCS derives charge data for approximately 90 percent of all CPT codes because the vast majority of data reported is for the most common 10 percent of CPT codes. The MDR Database derives charge data for all CPT codes. Derived percentile amounts are estimated for both PHCS and MDR by: (i) grouping together various CPT charges after the different CPT charges have purportedly been adjusted so that they are comparable; (ii) computing the percentiles of the combined CPT charges; and (iii) readjusting the percentiles of the combined data to represent the percntiles of the different CPT charges. However, Ingenix fails to adjust for the differences in the spread of charges (i.e.,

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equal to or less than the actual 80th percentile value.

standard deviation) within each CPT code among the combined CPT charges and, as a result, the derived percentiles are all biased (other than the mean). This flaw tends to result in understatement of the Upper Percentiles of the derived PHCS and MDR data for those CPT codes with a large spread of charges. This means that the estimation of the relevant data points for the calculation of R&C are biased by Ingenix's improper methodology for deriving data.

The end result of Ingenix's methodology is that the Ingenix data:

- Does not use appropriate statistical methodology (including sampling, data editing or data estimation) and as a result, creates data that is biased and inappropriate for use in computing R&C.
- Does not ensure that the data it collects does not pre-screen out valid high charges, does not contain non-market charges, and is complete in that it contains all the requested information on all the Data Contributors' relevant charges;
- Does not ensure that the data it reports is representative of the total population of relevant charges in the geographic area;
- Does not collect or report data by provider;
- Does not report[4] the qualifications of the providers billing the charge data (whether medical doctor, nurse practitioner, physician assistant, etc.);
- Does not report the training, experience or expertise of the providers billing the charge data;
- Does not report modifiers billed by the providers;
- Does not report the place of service (*i.e.*, clinic, hospital, medical office) for the charge data;
- Does not report the type of service (*i.e.*, inpatient, emergency, ambulatory surgery) for the charge data;
- Improperly edits out valid charges, which biases the Upper Percentiles of reported data and

4 I will use the word "report" to mean "collect", "determine", "include" "identify," and "use as a basis for R&C calculations."

- Statistically incorrectly estimates derived percentile data which biases the Upper Percentile values.

I explain in detail below my critique of Ingenix's methodology and my conclusion that the MDR and PHCS databases are unreliable and invalid for determining R&C amounts for services rendered to Aetna members by out-of-network providers. I also provide an overview of how Aetna's claims system uses the Ingenix data to make R&C determinations.

VIII. DETAILED DISCUSSION REGARDING INGENIX'S METHODOLOGY INGENIX'S DATA CONTRIBUTION FLAWS (STEP 1)

Proper statistical procedures require that Ingenix assess the completeness and accuracy of the data it receives from its Data Contributors, and ensure that its rules are being followed. A Data Contributor database cannot be considered valid when there is inadequate data quality control in place. Ingenix's methodology for selecting a convenience sample[5] without testing or validation results in two fundamental flaws: *first,* one cannot assume that the Contributed Data was representative of the population of charges; and *second*, there were no controls in place to ensure that Data Contributors were contributing appropriate data (*e.g.,* market charge data, complete data reflecting all of their relevant charges, etc.) and were not pre-editing or pre-scrubbing their Contributed Data. The mere existence of large quantities of data would not remedy the fundamental flaws caused by incomplete, unrepresentative and pre-scrubbed Contributed Data.

Recent testimony provided by Aetna, CIGNA and Ingenix witnesses have confirmed the numerous deficiencies in Ingenix's data collection process which I discussed in prior reports. These

5 A convenience sampling and the reward system in which reimbursement is based only on the amount of data passing screening entices Data Contributors to eliminate high values when submitting data regardless of whether the charge was valid or not. Another flaw is that the data contributed by each Data Contributor was not established as representative of all its charge data.

deficiencies render the data unusable for the stated purpose of assisting Ingenix customers (such as Aetna) in determining R&C.

A. Ingenix Does Not Receive Useful Data on Provider, Place of Service, Difference in Level of Service or Type of Service within CPT Codes Necessary for Properly Estimating R&C

Ingenix has never consistently received expanded information from its Data Contributors. As a result, Ingenix only uses limited information consisting of the date of service, CPT code (5 digits only rather than 7 digits which would include modifiers), billed charge and provider's zip code. When Ingenix started to collect provider information (*e.g.*, the identity of the provider, the provider's professional degree specialty, etc.), its Data Contributors provided it partially or not at all. As a result, Ingenix continued doing its analysis and created the final PHCS and MDR data without considering provider-specific information. Data Contributors also do not consistently contribute other data fields that Ingenix purports to require, such as patient information, place of service and type of service. Thus, Ingenix does not consider these additional factors in the Ingenix databases.

Aetna, CIGNA and Guardian, all confirmed that they do not provide adequate expanded data to Ingenix. CIGNA, for example, provides fewer than half of the allegedly required data fields, and provides *no* provider-specific information (*e.g.*, the name and address of the provider; his or her licensure, specialty, etc.). At least until March 2005, when it apparently stopped contributing data, Guardian continued to contribute only the same limited four data elements that it contributed since the 1970s and it failed to provide provider-specific and patient-specific information. Ingenix has consistently acquiesced in receiving Contributed Data that does not include most of the requested information from Data Contributors and has continued to use only the same four data fields

employed since the inception of the HIAA database: billed charge, date of charge, zip code of location where service provided; and CPT code.[6]

B. CIGNA's Contributed Data Illustrates That The PHCS Sample Is A Convenience Sample

Both currently and in the past, CIGNA has maintained multiple claims systems. When I filed my report, "Plaintiffs' Supplemental Expert Report," dated June 15, 2006, I noted that: "CIGNA contributes data to Ingenix from only four of its nine claims systems. The five claims systems from which CIGNA does not contribute data are nationwide in scope. CIGNA stated that it decided not to contribute all its data to Ingenix because contributing additional data would not increase the discount it receives from Ingenix (75 percent). CIGNA has only one claims system from which it contributes data to Ingenix that contains any HCPCS data."[1]

It is my understanding that CIGNA verified that it "has historically submitted claims data to Ingenix from four of its claims systems: Dentacom, Medicom, CIGNA Claims, and Proclaim. As of November 2007 and March 2008, CIGNA ceased submitting data from CIGNA Claims and Medicom, respectively, to Ingenix because these claims platforms processed very few claims. Beginning in November 2009, in addition to Proclaim and Dentacom, CIGNA began submitting claims data for claims processed on Power MHS." Power MHS is one of CIGNA's major claims processing systems.

With respect to its other claims process systems, CIGNA states that:

> CIGNA does not submit data from the rest of its claims engines: single-site MHS, Amisys, MHC, CBH, PowerStepp (CIGNA Voluntary), Worldcare (CIGNA International) or Diamond 950 (CIGNA International). There are several reasons that CIGNA does

6 HIAA, the operator of the predecessor database, stated that these four data fields were selected because they were relatively easy for Data Contributors to submit. HIAA acknowledged they do not provide provider-specific, patient-specific, service-specific information about the charge.

> not submit data from the remainder of its claims systems. First, CIGNA is not required by its contract with Ingenix to submit data from any particular claims system CIGNA sends data on a voluntary basis. Second, sending data from the remaining claims systems to Ingenix is not technologically practical. The four claims platforms from which CIGNA has historically sent data to Ingenix have capabilities that allow CIGNA to extract the data that Ingenix needs. Sending data from the remaining claims platforms would require considerable modifications to the claims platforms, and would also require CIGNA to develop an IT solution for extracting the data from those claims platforms. Third, when Ingenix customers send Ingenix a certain volume of data, Ingenix in turn provides those customers with a discount on data from the Ingenix PHCS database. CIGNA receives the maximum discount as a result of the data that it sends to Ingenix. Sending additional amounts of data would not result in any additional discount. Fourth, the claims platforms that CIGNA does not submit data from are minor claims platforms that only comprise a small fraction of the claims processed by CIGNA. Finally, based on the data that goes into the claims platforms, CIGNA has no reason to believe that sending data from Proclaim, CIGNA Claims, Medicom, Dentacom, and Power MHS, but not the remaining platforms, materially impacts the data it send to Ingenix.

Without production of the underlying factual or statistical evidence, CIGNA's claim that "sending all its data would not materially impact the data sent to Ingenix" cannot be verified. It should be noted that this statement is not justified by the mere fact that these claims are only a small percent of CIGNA's total claims. If the deleted claims are disproportionately high priced, and for CPT codes with few observations per zip code, a few claims could drastically change the percentile distribution and UCR estimate. Moreover, CIGNA only started contributing claims data to Ingenix from Power MHS (one of its two major claims engines) in 2009. Even if the data supplied by CIGNA is representative of CIGNA's population of charges, if CIGNA is a high-price insurer (*i.e.*, CIGNA's out-of-network clients tend to use higher priced providers than the clients of other insurers), simply restricting the number of charges sent to Ingenix will bias the Ingenix database.

From a statistical perspective, it is the responsibility of the producer and the user of the data to assure that the convenience sample is a proper and representative sample of the population of interest. As in my supplemental expert report in Health Net dated June 15, 2006, I noted:

> proper statistical procedures require that Ingenix assess the completeness and accuracy of the data it receives from its Data Contributors and ensure that its rules are being followed. A Data Contributor database cannot be considered valid when there is inadequate data quality control in place.

I have subsequently learned that in response to Ingenix's revised Data Submission Information form, although CIGNA certified that it "attests that the service zip code provided in service zip field (example: field #20 on Ingenix's recommended Record Layout) is populated with the zip code where services were rendered which is not necessarily the provider billing address zip code," Ingenix was aware as early as in 2001 that CIGNA could not supply the zip code where the service was rendered, but only the provider billing address zip code. Despite this, Ingenix used CIGNA data until 2009, when it discontinued using CIGNA data because of this problem.

I have also learned that, at some time, rather than submitting individual charges CIGNA submitted total charges and total number of occurrences to Ingenix for one of its claim processing data sets. If CIGNA simply groups identical charges together and reports that value and the number of such charges, then that is a valid statistical procedure. However, if CIGNA groups charges of different values and reports the average and the number of charges, then that is an invalid statistical procedure. I am unclear at this time as to which case the average charge sent to Ingenix represents. If it is the latter, then Ingenix's handling of the data is incorrect and biases the percentile data it reports. Rather than discarding the data as useless, Ingenix considered the data as multiple charges,

incorporating them all at the average. This approach obviously biases the UCR estimate down. For example, if there are only 10 charges in a zip code, and the charges average $100, Ingenix would consider these to be 10 individual charges at $100 each, and any charge in excess of $100 would be considered to be above the 80th percentile. However, the $100 average could be composed of five charges at $110 and five charges at $90; therefore, one-half of the charges would incorrectly be considered "atypical" of the charge distribution. To the extent that other contributors supplied aggregated different charge data and Ingenix used the average values as it did for CIGNA, it would bias the distribution profiles used to compute R&C downward.

C. Guardian Violated Ingenix's Data Contribution Requirements

Guardian never contributed all of its available data. It produced no charge data relating to anesthesia procedures. Its Contributed Data was limited to certain CPT codes, and specifically excluded data relating to other CPT codes. Except for three modifiers, Guardian's data excluded modifiers which were identified on the providers' billed charges.

D. Aetna Profiling

It is appropriate for a Data Contributor to edit out data errors. However, it is important that Data Contributors do not pre-edit or pre-scrub out data to remove valid charges which it labels "outliers." There are two reasons for this requirement. First, such pre-editing may remove valid charges and biases the percentile values in the collected data. Second, Ingenix's scrubbing process presumes and requires that the Contributed Data is not pre-edited or pre-scrubbed.

Aetna was and is Ingenix's largest data contributor. Its contributions to Ingenix are now 25% of the total data Ingenix receives. *See* Weil Gotshal letter, Dec. 17, 2009 to Aetna subscriber counsel. In my prior report, I analyzed Aetna's profiling rules based on Aetna's documents. I have

subsequently learned that Aetna did not follow these rules as written in total. I am advised that discovery is being conducted to determine the extent, if any, to which Aetna removed charges automatically that exceeded the R&C applicable to such claim.

E. Ingenix's Fails to Insist on Compliance with Its Rules or to Audit its Data Contributors and Ignores Problems in Contributed Data Even When It is Aware of Them

Proper statistical procedures require that Ingenix assess the completeness and accuracy of the data it receives from its Data Contributors, and ensure that its contribution rules are being followed. A Data Contributor database cannot be considered valid when there is inadequate data quality control in place.

Despite the importance of Ingenix receiving all available "un-scrubbed" and market rate data (*e.g.*, excluding governmental payor data) from its Data Contributors, Ingenix took no steps to ensure that this occurred. Ingenix did not inquire or overlooked information as to how CIGNA, Aetna or other Data Contributors selected data, or whether they scrubbed it, or included non-market rate data. Aetna took from its interactions with Ingenix that it was free to pre-edit its data to weed out charges in excess of R&C. Significantly, Aetna informed Ingenix that it was pre-scrubbing its data using numerous Profiling rules. Ingenix did not inquire about these Profiling rules, and did not audit Aetna, but simply assumed that Aetna was submitting complete data. In fact, Ingenix agreed to change Aetna's certifications (which admitted non-compliance) to read "yes" instead of "no." Ingenix acknowledges that it is improper for Data Contributors to pre-scrub Contributed Data, but still took no steps to stop it, even when Aetna expressly informed Ingenix it was doing so.[7] Despite

7 It is both possible and likely that other Data Contributors are pre-scrubbing their Contributed Data prior to sending it to Ingenix. CIGNA, for example, could not state with certainty that it did not pre-scrub its Contributed Data.

Ingenix's understanding that pre-scrubbing biases the data, Ingenix used Aetna's Contributed Data even though it had been pre-scrubbed and incomplete.

Even though its Data Contribution rules require submission of the entire universe of charge data, and Ingenix requires its Data Contributors to certify that they have submitted the entire universe of charge data, Ingenix knew that its Data Contributors (including CIGNA, Guardian and Aetna) continued to contribute less than all of their available data, pre-scrubbed their Contributed Data, and failed to submit information for all required data fields. Yet Ingenix ignored, and continues to ignore, these violations of its stated policy. Neither, Aetna, CIGNA or Ingenix alerted data users that the previously compiled data violated its Data Contribution guidelines.

The following relevant chronology makes that clear:

1. Ingenix's pre-November 2004 contribution forms did not request, and Ingenix did not receive, Contributed Data reflecting the entire universe of provider data from its Data Contributors.

2. Commencing in November 2004, Ingenix changed its data contribution form to require each Data Contributor to certify that it was contributing the "entire universe of billed charges" and without alteration or pre-scrubbing.

3. Aetna, CIGNA and Guardian all signed the post-November 2004 certifications (as did other Data Contributors) despite continuing their prior practice of contributing less than the entire universe of billed charges from their claim systems.

4. Even when Aetna told Ingenix it was continuing to pre-scrub its data by using Profiling Rules, Ingenix accepted Aetna's pre-scrubbed data. Ingenix did not audit Aetna's contributions or assess the impact of Aetna's violation of Ingenix's stated rules. Ingenix did not

take any steps to enforce its stated rules or inform data users that its Data Contribution rules were not being followed or enforced.

5. CIGNA also periodically advised Ingenix that its data did not differentiate between rendering provider (place of service) zip code and billing provider (place of billing) zip code. Despite CIGNA's demonstrated inability to report rendering provider zip codes, Ingenix did not audit CIGNA and did not take any steps (at least until 2009) to ensure that its data was not being further compromised by CIGNA's noncompliant data.

6. Ingenix's attestation form and other certification requirements are simply *pro forma* and failed to ensure statistical accuracy or compliance.

The collector of the data in a convenience sample is responsible for testing and verifying the data to ensure that it is not biased and to ensure that its convenience sample is in fact representative of the population of charges. Ingenix failed to properly insure that its rules were followed, and knowingly let CIGNA and Aetna (and possibly others) contribute data (which Ingenix then used) that failed to meet Ingenix's own rules and standards. Ingenix's agreement to let Aetna submit noncompliant data while changing the certifications to indicate compliance is a striking example of acknowledging use of flawed and inadequate data.

IX. INGENIX'S INVALID SCRUBBING METHODOLOGY (STEP 2)

A. Common Data Created by Merger of PHCS and MDR Databases

Ingenix merged the PHCS and MDR databases so that it uses a common data repository ("Common Data") used to create both MDR and PHCS data. The result of this merger is that both databases rely on Common Data. Ingenix applies the same edits and scrubs ("Common Scrubber") to the Common Data for both MDR and PHCS, and uses the same geozips for both MDR and PHCS, a change from prior years when different geozip groupings were used for

MDR and PHCS. The MDR and PHCS final fee schedules differ as a result of differences in the final preparation of each database, after the Common Scrubber has scrubbed the Common Data. The PHCS and MDR 80th percentile values are different, despite Common Data and the Common Scrubber, because (i) PHCS reports "actual data" for some CPT codes in some geographic areas while MDR reports "derived" data for all CPT codes in all geographic areas; (ii) Ingenix uses different methods of combining different CPT codes (*i.e.*, PHCS uses bodily systems to group CPT codes while MDR groups CPT code ranges); (iii) Ingenix uses different conversion factors (*i.e.*, relative values which measure the average level differences between charges among CPT codes) for MDR and PHCS Derived Data; and (iii) MDR uses an inflation factor to adjust data over time, while PHCS does not.[8] In creating Common Data, Ingenix uses MDR's grouping method and relative values.

B. <u>The Common Scrubber Used for Both MDR and PHCS</u>

MDR and PHCS are Contributor databases, meaning that the data used in them is entirely contributed by entities other than Ingenix. Data Contributors submit their data on tapes or disks, and transmit it to Ingenix. Ingenix then edits, or scrubs, the Contributed Data by contributor and computes the credit due to each contributor for submitting data for the PCHS database. Ingenix only gives credit for data that passes (*e.g.*, is not eliminated by) its scrubs. As I described in my prior report, Ingenix does an initial preliminary scrubbing to eliminate obviously invalid data entries. For example, Ingenix eliminates data with obvious keypunch errors (*e.g.*, a CPT code or a

8 The difference in 80th percentile values in its two databases demonstrates that the R&C amount is sensitive to various data manipulations.

zip code which does not exist). This preliminary scrubbing is statistically proper and is not challenged.[9]

Ingenix uses other scrubs which bias the results reported and may create serious errors in what is reported. It groups together ranges of CPT codes and then subjects the Contributors' data to a method which scrubs and eliminates valid high and low charges as "outliers" which are deemed "unreliable."[10] This method is inappropriate because it eliminates valid charges and biases the estimation of the percentiles reported.

The Common Scrubber reviews each data record contributed by the Data Contributor which has not already been eliminated (*e.g.*, because it contains modifiers).[11] The stated reason is that eliminated charges represent modifiers that would affect the way a provider bills. This procedure, by definition, means that this database cannot be used to assess the reasonableness of any medical charges submitted to an insurer with these modifiers. Charges associated with given CPT codes are grouped together based on numerical ranges of CPT codes. All charges for CPT codes within that CPT code range are combined and are subjected to a Common Scrubber formula.

In order to combine all of the charges for the different CPT codes within the CPT code range, Ingenix converts each charge by the relative value for that CPT code (*i.e.*, the adjusted or standardized data value is the actual charge divided by the relative value of its CPT code). The

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9 One of these preliminary scrubs was to eliminate all charges of $1 or less. Significantly, Ingenix eliminated this $1 charge scrub. Ingenix has chosen to rely on its low screen edit. However, eliminating all charges of $1 or less from Medical and Surgical services as obvious data errors was a better procedure than relying upon a so-called statistical edit.

10 Ingenix uses a Common Scrubbing Process on all the data contributed by data contributors to MDR and PHCS. According to Ingenix, there are only two minor exceptions where it does not do so, both with respect to the PHCS database.

11 Ingenix's Contributed Data includes charges originally billed with these modifiers. Some Data Contributors (including CIGNA and Guardian) contribute charge data but delete modifiers. They will be included in the database, whereas data with modifiers is excluded. Ingenix's failure to audit its Data Contributors or to effect proper quality control over the Contributed Data causes indiscriminate and inconsistent treatment of charges billed with modifiers. Charges with modifiers are thus improperly compared to charges which were compiled without modifiers.

relative value is supposed to standardize (*i.e.*, account for) the differences in the average values of the charges among different CPT codes. This process, however, does not adjust for the spread from the mean of different procedures. All standardized charges in the CPT code range are then subjected to a high and a low formula. The two basic formulas to eliminate contributed data on the high end and low end, respectively are:

(i) **"Flag if charge is > RV x per 80 x hifct"**

(ii) **"Flag if charge is < RV x per 50 x lowfct."**

Translated, the high formula (*i.e.*, (i) above) means that Ingenix eliminates a contributed charge if it exceeds the product of the relative value for that CPT code multiplied by the 80th percentile for the combined data in the CPT code range (the "per 80") multiplied by an arbitrary high factor number (hifct) determined by Ingenix.[12]

The per80 and per50 values for a particular CPT code range incorporate the charge data for a broad range of CPT codes combined together, and adjusted for average value or "level" among the CPT codes, but not adjusted for the differences in the spread of charges within each CPT code (measured statistically by standard deviation from the mean). Not adjusting for the spread of charges means the formulas do *not* consider the distinct distribution of charges for any particular CPT code (*e.g.*, infrequent, less common procedures will have greater spread from the mean than more frequently performed simple procedures; procedures performed by different types of providers will have greater spread from the mean than those performed by a single type of provider, etc.).

12 The values of the high and low factors ("hifct" or "fee high" and "lowfct" or "fee low") that are used in the Common Scrubber formula are arbitrary. Very similar high and low factor values have been in use since 1992. Ingenix uses 1.95 as the high factor for all medical procedures; 1.8 as the high factor for all radiology procedures; 1.88 as the high factor for all laboratory procedures; and 1.9 as the high factor for all surgical procedures.

Ingenix's methodology rests on the assumption -- without proof or reason -- that the distribution of charges as to all CPT codes in the CPT code range is the same. In short, Ingenix uses relative values to standardize the data, but fails to account for their distribution as measured by standard deviations among charges in each CPT code range. Ingenix's failure to account for standard deviations is a fundamental error and creates a bias in the estimation of the percentiles of CPT code charges. Moreover, it generally will incorrectly eliminate valid high charges in those CPT codes with a large spread of charges relative to those among the other CPT codes.

To illustrate this, consider the following hypothetical:

CPT Code 1:	**1,000 charges, all $50 (relative value equals 1)**
CPT Codes 2-10:	**10 charges for each code, all with means of 100, but with significant variance in charges (relative value equals 2)**

Assume the charges for CPT code 2 are as follows:

50, 50, 50, 50, 50, 50, 100, 150, 225, 225 (mean of 100)

Because of the numerical dominance of CPT code 1, the per 80 value for the entire range of CPT codes 1-10 will be $50. Thus, the Common Scrubber formula using a hifct of 1.95 will eliminate as unreliable outliers all charges for CPT codes 2 through 10 which exceed $195 (*i.e.*, 1.95 x 50 x 2). Specifically, all charges above $195 for CPT codes 2-10 will be eliminated, even though such charges are valid and not unusual for the particular CPT code. For example, for CPT code 2, the two $225 charges would be eliminated as unreliable (*i.e.*, because they exceed $195). They are eliminated even though they are valid charges, and are not unusual for the particular CPT code (*i.e.*, they reflect 20 percent of the charges).

The 10 charges noted above for CPT 2 ($50, $50, $50, $50, $50, $50, $100, $150, $225, $225) could reflect differences in provider qualifications. In other words, the $50 charges may reflect charges billed by a physician assistant, while the higher charges ($100, $150 and two at $225) may reflect charges billed by a medical doctors or medical specialists (*e.g.*, cardiologists). Elimination of the two $225 charges is incorrect and skews the data downward.

The Common Scrubber is applied without regard for provider specialty, training, experience, expertise or qualifications, such as whether a provider is a physician or not, and regardless of the type or place of service. As might be expected, higher priced charges within a CPT code may reflect such things as increased complexity, impaired patient health, or greater provider qualifications or experience. By combining charges for CPT codes, adjusting only for the difference in level and not for standard deviation among charges for each CPT code, high charges which are valid may be regarded as unreliable outliers, and are eliminated from the Common Data, thereby skewing downward the Upper Percentile values in the final Ingenix data.

C. The Dental Data Example Illustrates the Various Problems That May Result In Underestimating R&C at the Upper Percentile Values

There are three primary problems demonstrated by the Dental Data example: (1) the Ingenix data underestimates the charges of specialists by combining the charges of providers without regard to specialty; (2) the Dental Example confirms that a consumer may view that R & C is based on the distribution of doctor's charges, not the distribution of billed charges; (3) the three-digit zip code definition of medical area may be totally inconsistent with what a consumer may consider the relevant medical area.[13]

13 Ms. Faddis took a census of all available dentists and periodontists in the geographic medical area which she would consider for treatment. Because she attempted to contact all relevant providers, her efforts are properly described as a census, not a convenience sample.

On August 24, 2001, Jill Faddis, a CIGNA subscriber, faxed questions to Carla Gee of Ingenix relating to her husband's R&C reimbursement for a dental procedure performed by a periodontist. The billed charge was $140 while the R&C reported by the PHCS database was less than half that amount ($65). The fax also included her census of periodontists listed in the yellow pages giving their rates for the identical procedure codes (see Exhibit 14 Ingenix 00857). On October 31, 2001, Ms. Faddis sent a follow-up letter and census, stating:

> I have identified the problem. The dentists and periodontists are using the exact same codes for their service even though the service is not the same . . . It is obvious to me now that when Ingenix and other such data collecting companies comprise their data, they do so by looking at the codes and coming up with figures that represent the vast number of bills charged by dentists which far outweigh those bills charged by periodontists. This is an outrage and certainly not accurate.

She asked Ingenix to explain why the final Ingenix R&C amounts for two particular CDT codes were both $65 when her census of billed charges by periodontists in her geographic area reflected higher charges than on the Ingenix data. (The surveyed charges for CDT codes 0140 and 0150 ranged from $110 to $163 compared to the PHCS 90th percentile of $65 for each CDT code.)

Ingenix reported that it had been incorrectly scrubbing out between 3-5 percent of charges, mostly from the high end. By eliminating charges for being "too high," Ingenix eliminated precisely the data it should be capturing. Even though Ingenix concluded that legitimate high charges had been scrubbed by Ingenix's Common Scrubber, it did not undertake any further analysis of the data, or otherwise take any effort to remedy the elimination of valid high charges. [14]

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14 Although Ingenix became aware of this phenomenon, it failed to evaluate, track its impact on any other CDT or CPT codes or disclose or reimburse subscribers for the underpayments. As the producer of this data, Ingenix failed to ensure data quality at all steps during the process.

It then restored the charges and recomputed the R&C. Even after adding back in the scrubbed out high charges, the 90th percentile value for D0150 only increased by $2, from $65 to $67. The 90th percentile value after Ingenix restored the scrubbed out high charges and re-computed the values increased 15 percent, from $65 to $75. Jill Faddis's census demonstrates the inadequacy of the Ingenix data. For CDT D0150, Ms. Faddis's census shows the following charges: $140; $125; $125; $163; $162; $162; $140; $110; $125; $130; $149. (Her periodontist charged $140.) Ingenix reported that its PHCS data for CDT code D0150 reflected charges ranging from $16 to a high of $125. Thus, 7 out of 11 periodontist providers charged *above* $125, the highest charge appearing in the PHCS data; 3 out of 11 periodontist providers charged $125, and only 1 out of 11 charged *less* than the highest charge ($110).

Ingenix reported that the charges for CTD code D0140 ranged from $16 to $120. For CDT D0140, Ms. Faddis's census shows the following ten charges for periodontist providers in her area: $90; $90; $90; $103; $106; $106; $98; $60; $92; $100. The average charge in her census for CDT code D1040 is $103.50. Moreover, 9 out of 10 periodontist providers in Ms. Faddis's census charged *above the 90th percentile value* both before and after the scrubbed out high charges were restored.

There are various reasons why the 90th percentile can additionally understate the typical charge, even after correcting for the error in scrubbing out valid high data: *first,* Data Contributors (such as Aetna) may have pre-scrubbed out periodontist provider charges for this procedure from their Contributed Data, or may have simply failed to contribute all of the available claims data, such that most periodontist provider charges for these CDT codes were not submitted to Ingenix; *second*; the Insurers who manage the claims for the periodontist providers in these areas may not be Data

Contributors; *third*, the geozip used by Ingenix to report the data did not properly reflect the consumer's medical market area for the service in question; and *fourth,* because dentists bill the same CDT code but charge much less (i.e., $64 in Ms. Faddis's census), and there are many more dentists than periodontist providers, the lower-priced dentist charges swamp the higher periodontist provider charges, skewing down the values even at the 90th percentile. (To the extent dental assistants and other ancillary providers are able to bill for CDT 0150 or CDT 1040, this phenomenon will be even more pronounced.) The end result is that the Ingenix data skewed the Upper Percentile values downward.

This Dental Example shows the inadequacy of the Ingenix data to meet the core concepts and factors. Significantly, CIGNA did nothing to investigate how the flaws exposed by the Dental Example could be rectified or mitigated. Aetna chose to ignore the flaws brought to light by Ms. Faddis, a CIGNA subscriber, and did nothing to disclose these flaws to its members, or to press Ingenix to fix them.

The same phenomenon illustrated by Ms. Faddis's census of periodontists and dentists may occur for all types of procedures in all geographic areas. This data confirms my opinion that by failing to collect all available data (by pre-scrubbing or otherwise), by scrubbing out valid charges, and by combining charges from various types of services without any consideration of provider qualifications or the type of service provided (within the CPT code), Ingenix's percentile data cannot be used to determine R&C.

D. The Scrubbing of High Charges is Not Balanced Out by Scrubbing Low Charges, and Biases the Data

The removal of invalid charges (be they high or low) is appropriate. The problem is that removing charges that are statistical outliers does not mean that one is removing invalid data. Assuming that five high and five low charges were removed, the question is which of those removed charges (or those not removed) are actually invalid and should have been removed. As I pointed out previously, if one assumes all charges removed are valid and therefore should not have been removed, the removal of such charges can bias the R&C downward. In this section, I explain why the incorrect removal of valid high charges would not be generally offset by the incorrect removal of valid low charges. However, this should not be construed to imply that one can actually determine the effect of applying statistical outliers to actual data, because, in order to determine the actual effect of the pre-screening process one would need to determine which charges are actually valid.

As I discussed in my prior report, Ingenix's scrubbing of some charges on the low end is not balanced by its scrubbing of charges on the high end. Even if Ingenix edits out more low than high charges, the scrubbing of high charges still skews the database downward.

Assuming that the statistical edits were equally likely[15] to remove valid high and valid low charges, the result would bias the Upper Percentile values downward. Even removing many more valid low charges than valid high charges may not offset the effect of removing high charges and biasing the Upper Percentiles downward.

This fact is illustrated by the following hypothetical case: Consider a case in which we have 100 valid observations in rank order, so the 80th observation is the 80th percentile. All the

[15] Given that one would expect the percent distribution of charges to be skewed to the right (larger values) (*i.e.*, it is more likely to see a valid charge twice the mean charge than one-half the mean charge), one would expect more high valid charges than low valid charges to be incorrectly removed.

observations represent valid charges. Suppose we eliminate the top 20 percent of the observations through pre-screening (as Aetna does) or scrubbing of the data. As a result, the 100th percentile of the screened data is what had been the 80th percentile, which is the true 80th percentile. No matter how many low values are pre-screened out (assuming, of course, that some data remains after scrubbing) the reported 80th percentile will be lower than the true 80th percentile, since the true 80th percentile will always be the reported 100th percentile

Similarly, consider the following hypothetical example: 100 charges are numbered consecutively between 1 – 100. As a result of the editing, assume that all 10 charges between 91 and 100 are deleted from the high end, and all 30 charges from 1-30 are deleted from the low end. This hypothetical thus assumes that Ingenix is scrubbing out three times as many low charges (30) as high charges (10). Even so, the elimination of one-third as many high charges still skews the 80th percentile value downward. (see footnote 3).

After scrubbing the 30 charges from the low end and the 10 charges from the high end in this hypothetical, 60 charges remain, from 31-90. The 80th percentile of the scrubbed charges is 78 (.8*60+30). Thus, even where Ingenix edited out three times as many low charges as high charges, the statistical effect of removing high charges is to skew the database downward.

X. PUBLICATION AND ANALYSIS OF FINAL FEE SCHEDULES (STEP 3)

Only the Common Data that the Common Scrubber does not eliminate is used to create the final Ingenix database fee schedules.

A. PHCS Actual Data

Ingenix creates PHCS fee schedules by taking the Common Data that the Common Scrubber did not eliminate for each CPT code, with only minor exceptions. If there are nine or more

occurrences (*e.g.*, charges), then Ingenix considers the data to be "actual data" and reports the actual data at each percentile (*i.e.*, 50th, 60th, 70th, 75th, 80th, 85th and 90th along with the mean and the mode charges.) The PHCS database reports "actual" data for only 10 percent of all CPT codes, and derives data for approximately 90 percent of all CPT codes. Ingenix states that 90 percent of the Contributed Data is attributable to 5 percent of CPT codes, leaving an insufficient number of "actual" charges for the vast majority of CPT codes.

B. PHCS Derived Data

Ingenix derives data for PHCS for each CPT code in which fewer than nine charges passed the Common Scrubber for that geographical area (geozip). Ingenix groups together broad CPT ranges into a bodily system. (There are 15 surgical, 15 anesthesia and 26 medical service bodily systems.) For example, Ingenix considers all CPT codes from 40490 to 43499 to be in the same bodily system ("upper digestive system"). There is wide diversity among these CPT codes, ranging from the simple repair of lip (CPT 40490, rv of 5.50) to the very complex (esophagectomy, CPT 43116, rv of 240). The data that passed the Common Scrubber for all CPT codes in a bodily system in the geographic area is used to derive the data for the CPT codes in each bodily system with fewer than 9 charges. To create the 80th percentile for a CPT code with fewer than 9 reported charges, Ingenix first computes the 80th percentile for charge data from all CPT codes within a bodily system and area. In order to combine across different CPT codes within a bodily system and area, Ingenix adjusts each charge using the RVs from Relative Value Studies, Inc. ("RVSI"). That is, each charge is divided by RVSI's RVs (these RV values are different from those used in the scrubbing process) and referred to as "converted" charges. That is, if one CPT has a relative value of 2 and another

has a relative value of 4, the average cost of charges in the second CPT is twice (4/2) that of the first.

The 80th percentile value for the adjusted charge data for the bodily system is then calculated. This is referred to as the "converted 80th percentile." This value is then used to derive the 80th percentile value for all CPT codes with fewer than nine observations in the same bodily system and area. This is done simply by reconverting the converted 80th percentile to adjust the average level of the specific CPT code that the derived data represents. Specifically, the derived 80th percentile for the CPT code would be the converted 80th percentile for its bodily system times RVSI's RV for that CPT code. Ingenix uses the same method to derive each percentile for each CPT code in that bodily system and area in which fewer than nine data points pass Ingenix's scrubbing process.

C. MDR Reported Data

Ingenix derives MDR data from the Common Data using the same methodology as for the PHCS derived data. Ingenix uses different relative values, and combines different ranges of CPT codes, but the methodology for deriving data between MDR and PHCS is the same.

The CPT code book groups together CPT codes for a procedure from the simplest to the most complex. Sequentially numbered CPT codes, therefore, reflect both simple and far more complex procedures. Ingenix states that it wanted to change its current system to use more similar, non-contiguous, non-sequential CPT code ranges. Despite this recognition, Ingenix has only used this method to calculate conversion factors in its HCPCS database and not for its other databases (medical/surgical, anesthesia, dental, etc.).

This process of combining CPT data together to conduct analyses and then breaking the results back out to specific CPT codes is similar to what Ingenix does in its Common Scrubbing process. Just as with the Common Scrubber, Ingenix's process for computing derived data for both MDR and PHCS Derived Data assumes that the distribution of charges among all CPT codes in a bodily system are the same, and fails to account for standard deviations in the charges for each CPT code.

D. The Methodology For Creating Derived Data for CPT Codes with Fewer Than Nine Occurrences Is Statistically Invalid

The key to combining data across a range of CPT codes is standardization of the charge data. Proper standardization enables the meaningful combination and comparison of charges across different CPT codes. When combining data across a range of CPT codes, Ingenix must standardize the data to account for the differences in the level and spread of charges among CPT codes. Data standardization by level and spread is a common issue for statisticians.

There are proper well-known statistical methodologies for combining data with different means and variances. For example, if the data in each CPT code had been standardized by its relative mean and relative standard deviation, the data could be combined and then unwound by reversing the process. Assuming adequate and proper data (a requirement not satisfied in either MDR or PHCS), such a methodology could estimate each CPT's percentile distribution from the combined data.

By proper standardization, considering differences, both the relative levels and the relative standard deviations, the 80th percentile value in one CPT becomes equivalent to the 80th percentile value in every other CPT code, and all the combined data is comparable. However, if one standardizes only for level, the only combined values that are actually comparable are the average

values. Since R&C involves knowing the Upper Percentiles, all the combined data must be comparable, unbiased estimates of the Upper Percentile values.

Ingenix, however, standardizes only for level by using the RV. For example, if the charges in CPT code 1 are, on average, twice that of those in CPT 2, then the charges in CPT code 2 are simply doubled (or conversely, those in CPT code 1 are divided in half). Then, Ingenix groups them and the difference in the average level of charges between the two CPT codes is accounted for in the combined charge data.

Because Ingenix fails to consider that some CPT codes have a wider distribution of charges (*i.e.*, standard deviation) than others, the derived percentiles would be expected to understate the true higher percentile value for these CPT codes. This is a particularly significant problem because those CPT codes with a large number of cases tend to be the most common and to have the smallest standard deviation, while the CPT charges with a mix of types of providers and specialties and complex procedures would be expected to have a greater standard deviation. That is, Ingenix's flawed method of combining data without proper standardization groups together data relating to numerous procedures so that the more common, less expensive procedures, which typically have little variation, will dominate in number compared to the more specialized and less common CPT codes. As a result, when the data is combined based only on the relative value of charges, almost any charge above the mean in the less common CPT codes with a higher relative standard deviation can appear to be unusually high.

Consider the following simplified hypothetical:

> [Note: The underlined value is the 80th percentile of each distribution.]
>
> CPT 1: charges 9, 9, 10, 10, 10, 10, 10, <u>10</u>, 11, 11 Average = 10

CPT 2: charges 50, 50, 50, 100, 100, 100, 100, 150, 150, 150
Average =100

Combining the two CPT codes using RV of 10 for CPT 2 yielded:

5, 5, 5, 9, 9, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, 11, 11
15, 15, 15

Thus, the combined 80th percentile is 11, which translates back to 11 for CPT1 (11 x RV of 1) and 110 for CPT2 (11 x RV of 10). Therefore, the three 150 charges in CPT2 (which are actually the 70th percentile for CPT 2) are now classified as being above the 80th percentile for the combined data set.[16] By failing to account for the standard deviation in the charges for CPT2, Ingenix's methodology skews the 80th percentile value downward from 150 to 110.

Also, consider the following hypothetical:

Hypothetical

CPT 1						**CPT 2**				
RV = 1						**RV = 2**				
		Adjusted						Adjusted		
Charge		Charge		Frequency		Charge		Charge		Frequency
		(1)		(2)				(1)		(2)
150		150		79		220		110		4
160		160		21		300		150		2
152		152		Avg. Chg.		380		190		2
						400		200		2
						304		152		Avg. Chg
CPT 3						**CPT 4**				
RV = 3						**RV = 4**				
		Adjusted						Adjusted		
Charge		Charge		Frequency		Charge		Charge		Frequency
		(1)		(2)				(1)		(2)

16 Note: the "converted" 50th percentile is 10, which correctly translates back to 10 (10 x 1) for CPT code 1 and 100 (10 x10) for CPT code 2.

330		110		2			490		123		2
450		150		1			647		162		6
570		190		1			608		152		Avg. Chg
600		200		1							
456		152		Avg. Chg							

All Adjusted Charges		
Value	Frequency	
	(1)	
110	6	
123	2	
150	82	
160	21	80th Percentile
162	6	
190	3	
200	3	

In this hypothetical, 80 percent of the charges in CPT code 4 and 20 percent of the charges in CPT codes 2 and 3 would incorrectly be deemed to be unreasonable, based on using the incorrect derived 80th percentile as the R&C value.

XI. AETNA ALSO USES ITS OWN DATA TO DETERMINE R&C

In instances where no Ingenix data was available, Aetna used other data to determine R&C amounts. For example, Aetna used its internal data to create what it referred to as Aetna Market Fee Schedule ("AMFS") data. It is my understanding that the data that Aetna uses in its AMFS does not consider provider; provider specialty; licensure and other relevant qualifications. Hence Aetna's analysis based on this data cannot meet the plan requirements for R&C.

XII. AETNA ALSO USES MEDICARE 125% TO PRICE NON-PARTICIPATING PROVIDER BENEFITS IN HMO PLANS

In 2002, Aetna began switching the methodology by which it paid R&C benefit determinations for non-participating providers ("Non-Par"). Aetna began "migrating" the methodology from paying HIAA80 to 125% of Medicare. Traceski Dep. Tr. 92:19-94:12, Exh. 4, AET-03761828, July 8, 2010.

This use of a percentage of Medicare methodology was expanded to include Durable Medical Equipment and Laboratory services. Aetna pays Non-Par providers of Durable Medical

Equipment at 75% of Medicare. Traceski Dep. Tr. 233:24-236:12; Exh. 16; AET-03540627-29. Aetna rolled out paying Non-Par providers of laboratory services in 2006 to 75% of Medicare. Traceski Dep. Tr. 236:13-238:18, Exh. 16, AET-03540627-29.

The switch from HIAA/Ingenix percentiles to a percent of Medicare reimbursement appears to be based on cost savings and ignores the core concepts and factors required to properly determine R&C.

Aetna did "savings" analyses relating to the switch from HIAA 80 to Medicare 125%. Aetna's own cost "savings" analysis determined that using these Medicare formulas saved Aetna between 36%, in some cases 51 % over using the Ingenix HIAA 80 data (which Aetna in other situations has vouched as the reasonable standard for calculating R&C payments for Non-Par services. Traceski Dep. Tr. 205:23-206:21; 210:4-22; 241:17-243:3; Exh.13; AET-03730979; Exh. 17; AET-3751922. In the New York, New Jersey, northeast region payment at 125% of Medicare the equivalent HIAA charge would pay 51% more than the 125% Medicare benefit payment. Traceski Dep. Tr. 241:17-243:3, Exh. 17; AET-3751922. The value of "nonpar claim profile for current HMO nonpar preferred care claims in 2003 was $500 million" dollars. Traceski Dep. Tr. 115:17-116:12, Exh. 5; AET-03774292-98. Estimated "savings" for moving from HIAA 80 to Medicare 125% for professional services in 2003 was 23.4 million. Traceski Dep. Tr. 202:11-205:8; 208:7-209:5, Exh. 13; AET-03730975-85. This estimate did not even include the money saved from using an alternate method of calculating initial payments for anesthesia. Traceski Dep. Tr. 210:15-211:22, Exh. 13; AET-03730975-85. Aetna was fully aware that Medicare 125% "rate would not be anywhere near close to what the market would bear for anesthesia." Traceski Dep. Tr. 215:2-20, Exh. 14; AET-03571225.

"Local markets" had the discretion to determine whether they choose to use HIAA 80 or a Medicare percentage methodology for benefit payments. Traceski Dep. Tr. 110:7-116:8, Exh. 5; AET-03774292-98.

Aetna also engaged in a strategy to try to get non participating providers into its network by using the "percent of Medicare" methodology for setting R&C. Paying benefits for laboratory services at 75% of Medicare was a "strategy" designed to compel Non-Par providers to join the Aetna network and negotiate a contract with Aetna. Traceski Dep. Tr. 239:8-240:7, Exh. 16; AET-03540627-29. Implementing a policy to pay members instead of paying providers was meant to get anesthesiologists to reduce their rates on the premise that the provider would prefer to be "paid directly by the carrier and not have to deal with billing members individually." Traceski Dep. Tr. 120:15-123:18, Exh. 7; AET-0377421-30.

The 125% for medical services and 75% Medicare payments for laboratory and durable medical equipment would be the "initial" and payment of full charge would only be made if there was a challenge. Traceski Dep. Tr. 97:22-98:10, 240:11-22, Exh. 4, AET-03761828; Exh. 16; AET-03540627-29.

Aetna's implementation of the use of Medicare percentages ignores the core concepts of R&C, and does not satisfy the plan terms.

XIII. "TIERING" OF BEHAVIORAL HEALTH CARE NON-PAR BENEFITS BY AETNA

In September of 2006, Aetna implemented a system of "Tiering" that was employed in Fully Insured and Self Insured Health plans for the determination of behavioral health care service benefit determinations. Rocchino Dep. Tr. 56:1-12, July 30, 2010. The Tiering was Medicare percentage based methodology and placed non-participating providers in "buckets" by

licensure: 1) 100% of HIAA/Ingenix for Psychiatrists (MDs); 2) 80% HIAA/Ingenix (referred to herein as HIAA80) for Psychologists (Ph.Ds); 3) 60% HIAA/Ingenix for Social Workers, Licensed Clinical Social Workers, Marriage and Family Counselors, Psychiatric Nurses. Rocchino Dep. Tr. 31:24-32:5, 32:20-33:5, 33:11-23; 34:3-19, 58:17-59:13, 70:13-21; Exh.1, AET–04275723-24.

The Tiering methodology specifically recognizes that education and licensure should be taken into account in determining R&C health care benefit payments for non participating service providers. Rocchino Dep. Tr. 54:7-55:17. Although acknowledging the need to account for education and licensure, Aetna's decision to "Tier" non participating providers of behavioral health care services also arose out of other reasons which have nothing to do with the core concepts and factors that must be considered in determining R&C. Specifically it was developed because 1) competitors using a Tiering formula (with different percentages) Rocchino Dep Tr. 72:11-73:19; 2) the desire to reduce cost Rocchino Dep. Tr. 42:16-19, 54:20-24, 131:23-132:10, 133:3-19; and 3) Aetna's experience with structuring payment for in-network providers in its negotiated contracts Rocchino Dep. Tr. 52:23–54:4, 72:21-73:4, 111:23-112:7; as well as the desire to account for education and licensure in the payment of R&C benefits Rocchino Dep Tr 54:7-55:17.

The implementation of this Tiering methodology violated the core concepts and factors of plan terms as to Reasonable and Customary payment of benefits. Moreover, the Tiering methodology used was flawed in the following ways:

1. The Tiering began with using the Ingenix data which, apart from the other flaws discussed previously in this report, do not distinguish between Psychiatrists,

Psychologists, Masters of Social Work, Licensed Clinical Social Workers, Marriage and Family Counselors, Psychiatric RNs; AET-00453273.

2. This methodology was implemented at a national level without taking into account any differences in R&C that might occur due to charges in different geographic areas. Rocchino Dep. Tr. 73:9-74:8, 113:24-114:17.

3. Aetna did not analyze charge data to substantiate the validity, on a nationwide geographic basis, that the tiering of 100% for nonpar Psychiatrists, 80% for psychologists and 60% for the various other behavioral health care providers accurately reflects a true R&C for every geographic area and every CPT code. Rocchino Dep. Tr.72:14-73:4, 73:9-19, 73:25-74:8, 112:1-114:17.

4. Aetna did not perform an analysis for respective licensure charges for nonpar providers in specific geographic areas. Rocchino Dep. Tr. 36:8-17, 110:2-22, 112:16-114:6.

5. To the present day nonparticipating psychiatrists continued to be paid at HIAA80 which contains aggregate rates of psychiatrists, psychologists, social worker, psychiatric nurses. Thus, in effect, psychiatrists are not treated differently from other, less specialized, providers and, therefore, the R&C for services provided by psychiatrists will be biased downward. Rocchino Dep. Tr. 36:8-17, 56:18-25, 57:4-14; AET-C-0001458.

6. In addition to Tiering using HIAA 80 there is also evidence that, as an alternative to HIAA 80, Aetna used 125% of Medicare in its determination of the payment of non-participating provider benefits in conjunction with the percentage Tiering that commenced in September of 2006. Rocchino Dep. Tr. 44:2-9, 45:5-46:16, 63:9-22,

64:13-22, 68:11-69:24; Exh. 9, AET-01198041. The use of Medicare 125% violates the core concepts of R&C as discussed above.

7. Interestingly, Aetna recognizes the need to account for education and licensure in determine Reasonable and Customary benefit payments in its behavioral health care system, while disregarding that need in its R&C benefit determination for other health care services.

Moreover, in HMO plans where members received non-participating provider health care benefits, Aetna's practice was to offer an initial payment at 125% RBRVS; then, if challenged by provider, Aetna tried to negotiate, but would ultimately pay up to the billed charge. Traceski Dep. Tr. 94:18-98:10; 113:5-19; AET-03750771.

XIV. AETNA CAN CALCULATE, RETRIEVE AND REPROCESS UNDERPAID BENEFITS FROM ITS OWN DATA

Aetna can retrieve billed charges, allowed charges, source of R&C calculations, co-pays, co-insurance amounts, deductibles, and other information necessary to reprocess underpaid claims from its own data base. The determination of underpaid benefits for all class members from use of the Ingenix database or its other invalid R&C payments can be retrieved and determined for the reprocessing of claims and payment of proper benefit amounts as demonstrated by the sample spreadsheets provided by Aetna for Subscriber Plaintiffs Franco (HMO)(AET-04300140-42), Werner Medical (AET-04300031-42) and Werner Dental (ACAS)(AET-04300043); *see also* Traceski Dep. Tr. 265:20-25.

XV. RESERVATION OF RIGHTS

I reserve the right to supplement this report as additional material is made available to me.

XVI. CONCLUSION

After reviewing Ingenix's methodology (including data contribution editing and deriving percentile calculations), I conclude that the Ingenix databases are invalid for use by Aetna to determine R&C. Aetna's use of its own internal data or a percentage of Medicare are also invalid methods to determine R&C.

Dated: Philadelphia, PA
August 9, 2010

Bernard R. Siskin, Ph.D.

Exhibit 9

UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY
CASE NO. 07-CV-6039(SRC)(PS)

DARLERY FRANCO, et al.,

Plaintiffs,

vs.

CONNECTICUT GENERAL LIFE INSURANCE CO., et al,

Defendants.

In Re:

AETNA UCR LITIGATION
MDL NO. 2020
Master File No. 2:07-cv-3541

DEPOSITION OF:

BERNARD SISKIN, Ph.D.

- - - - - - - - - - - -

TRANSCRIPT of the stenographic notes of the proceedings in the above-entitled matter, as taken by and before CAROLYN CHEVANCE, a Shorthand Reporter, and Notary Public of the State of New Jersey, held at the offices of WHATLEY, DRAKE & KALLAS, 1540 Broadway, New York, New York, on May 13, 2010, commencing at 9:28 a.m.

BERNARD R. SISKIN, Ph.D.

with respect to the people that are going to be class members.

If you are just talking about all CPT codes, that wouldn't hold, necessarily. So I would...

Q Now, when you say the people who tend to be class members --

A Class members are people -- my understanding is class members are people whose -- who were not reimbursed at billed, at their billed rate.

Q And for people who are not reimbursed at billed, the appropriate measure of damages, and I want you to assume this, is the difference between true UCR and the Ingenix UCR, you do not know whether any individual class member was damaged or not, correct?

MR. EPSTEIN: Objection, asked and answered. Assumes facts not at issue.

Q Do you need it read back?

A No, it is a tautology. If I don't know what the real UCR is, as I don't

think anybody does, then you can't answer that question.

Q And as a statistician though, you believe that in fact true UCR may be higher, may be lower, or may be the same, as the Ingenix UCR for any given CPT code during the class period, correct?

MR. EPSTEIN: Same objection. Asked and answered several times now. Assumes facts not in evidence.

A I think -- I don't know what the true UCR is. If I don't know what the true UCR is, and I'm not willing to assume that it is always higher, always the same or always lower. I don't know.

I'm willing to make some assumptions about the trends and the overall patterns, but in any individual case I don't know what the answer is.

I don't know if anybody knows what the answer is. So to that extent, I would agree with you.

Q Do you have an opinion whether in the aggregate the UCR, as provided for by

the Ingenix databases, whereas applied from the Ingenix databases, is lower than the actual UCR?

MR. EPSTEIN: Objection. Assumes facts not in evidence. Uses terms that are not defined in this context. It calls for speculation.

A Do you want to reread the question?

Q Do you understand when I say, when I talk about in the aggregate?

If you take the database as a whole, do you have an opinion as to whether in the aggregate, using that definition, the Ingenix databases are higher, lower, or the same than the true UCR?

MR. EPSTEIN: Objection. Assumes facts not in evidence. Uses terms that are not defined in this context or at all. Calls for speculation as a result.

A If you mean an aggregate over all CPT codes, for all individuals, regardless whether they are in the class, et

case dependent on this definition?

A My opinions?

Q Yes.

A No.

Q On page five, following the definition, it is stated that "The definition above identifies certain of the core concepts necessary for developing an R&C standard."

Do you see that?

A Yes.

Q You refer generally to core concepts, both here today and as far back as your first report in 2004, right?

A Correct.

Q What do you mean by core concepts?

A Well, I've said, if one is going to define, from statistical viewpoint, a distribution of charges they have to be similarly situated so that you would expect the distribution of charges to only vary by -- sort of change the billing practice, you get a distribution of similar charges.

Then the core concepts are you

have to be controlling for those basic characteristics, such as the skills of the provider, the type of provider, the things which one would expect to effect charges.

Q How did you identify what the core concepts would be for purposes of determining what are similarly situated providers for services?

A Well, they were offered in my original -- based on combination of my own viewing as a consumer, what I think logic would define, that people would expect, based on discussion, what I read, some of the readings I had at the time, and that's basically where it comes from.

I said if you assume these are the type of core charges everybody is saying matters, none of these are taken into consideration.

Q When you say what you read at the time, first of all, when was that?

A 2004, there was a lot of depositions for the Hyatt (ph) people and in those days I was reading a lot. I don't

remember too much of it now.

Q Have you read anything since on this topic, in evaluating whether or not your core concepts, as defined in 2004, remain the appropriate core concepts?

A Well, you are saying -- these are types of core concepts that one would expect, and I think we need to be controlled for for it to be meaningful.

I don't contend that they are exhaustive or necessarily that every single thing I mentioned has to be controlled for.

That I think would have to be -- you know, essentially to a certain extent this is being done by the Syracuse Group.

But that basically these type are the type of factors that one would need to consider if you are really going to be control for in the analysis, if you are going to define charges which are similarly situated.

Q First of all I want to go back to my question so I'm sure I get an answer to it.

BERNARD R. SISKIN, Ph.D.

Since 2004 have you done any additional reading on what constitutes core concepts?

A I wouldn't cut it off 2004. Since I testified 2006, no.

Q Since your 2006 supplemental report?

A Correct.

I might have done something between then and 2008, I don't recall. I did nothing after testifying, I know that is the cut off date.

Q So between 2006 and 2008 you might have done some reading on the topic?

A Right.

Q You don't know one way or the other?

A I don't remember at this point.

Q After 2008 you know you have not?

A Correct.

Q What materials do you recall reading?

A I know there was a lot of

deposition testimony. I don't recall at this time the details.

Q Do you recall what deposition testimony you reviewed?

A No, not sitting here.

Q Do you recall with certainty there was deposition testimony on this topic?

A Well, there was deposition testimony, there was also testimony -- yes, it was deposition testimony.

And we deposed the other -- there was another expert that testified that everything under CPT charges is fungible, doesn't matter whether a cardiologist is reading your x-ray, your EKG, or general practitioner or nurse practitioner, it is all the same thing. So I'm aware that there is a debate over this issue.

Q Are you talking now about in the Health Net case?

A Right.

Q Now, based on your personal anecdotal experience, is that a fair way to put it?

A I wouldn't call it anecdotal.

Q Your personal views?

A I think the interesting question here is essentially you're telling the customer usual -- I'm a customer, I have healthcare plans, so essentially it is not anecdotal.

I'm giving what I think a typical -- and I've talked to a lot of people about this.

Q Who have you talked to?

A I've talked to doctors, I've talked to everybody in the office, I've talked to people because of this case, what they would think.

I have asked the question do you really think if you go to a specialist to read your cardiogram, your EKG that is the -- do you expect to pay the same thing when you go to the doctor.

Q Do you have any records of those discussions?

A No.

Q Do you know how many there were?

A For a period there was a lot of them. It was a big topic of conversation.

Q Other than talking to people in the office --

A In general. Other than that, no.

Q Do you know how many?

A No. I did Judge Hochberg's opinion, of course.

Q When it came out in 2008?

A Yeah.

Q Based on your testimony?

A I assume it is not totally on my testimony. Based on all -- her opinion based on her review of the record and facts.

Q Now, you noted that these are the types of core concepts, that your list is not necessarily exhaustive, nor is it necessarily that each of them have to be controlled for, correct?

A In all circumstances, that's correct. But I think these are the type of things that you need to consider.

Q Now you are not offering your

view on what the core concepts are as an expert opinion, are you?

A What I offered as an expert opinion in my report, as I said, as a statistician we deal with similarly situated all the time, and that's the concept people are talking about.

And these are the types of things that people would normally consider, for similarly situated, but I'm not saying that this is the definition of similarly situated.

Q And these are things that people would normally consider in similarly situated for purposes of medical charges?

A I think most of these are things people would consider, yes.

Q And that is based on the investigation that you described?

A Right.

Q Your reading and your discussions with people?

A Correct.

Q Are there core concepts that

Aetna is obligated to apply separate and apart from what's set out in the definition of reasonable and customary in its contracts?

A I have no idea.

Q That is a legal conclusion?

A That is a legal conclusion as to what they have to or do not have to.

Q You have no opinion on that?

A No.

Q So in this litigation you are not offering any opinion on the interpretation of Aetna's health plan language, correct?

A That's correct.

Q Or the interpretation of any other health plan language?

A I have never offered an opinion as to the interpretation of Health Net or anybody else's legal obligation.

I offer the opinion that the Ingenix, they do not consider these core concepts. So if they have to consider the basic core concepts, that they don't do it.

If you believe that everything

within a CPT code in a given geo zip are fungible and similarly situated, regardless of the provider, where the service is, and all those characteristics, then you would come to a different conclusion.

Q I'm sorry, I want to make sure I understood what you said.

Are you saying that you believe that under the Aetna contract language it is obligated --

A No.

Q -- to apply the core concepts you define in your reports?

A No, that is not what I said.

I said that -- what I said was that if you define -- if they are obligated to define, if the similar situated, okay, and if the obligation -- if similarly situated is met by the assumption that within a CPT code, regardless of the provider, regardless of the modifier, regardless of the place of service, regardless of any characteristics, qualifications or skills that the person giving the service, that they are all

fungible; then in fact the use of Ingenix database would be sufficient.

If that is not the case, and you define similarly situated considering any of the core concepts that I discussed, then clearly it would not be sufficient.

What that legal obligation for Aetna or any carrier contractually or anything, I have no opinion. No -- that's...

Q Now, you touched on similarly situated, and I would just like to explore that a minute to make sure I understand.

Similarly situated is a concept that you deal with a fair amount in discrimination cases, correct?

A Correct.

Q For example, in a disparit treatment case statistical analysis can be used to test whether employees in a protected class, who are otherwise similarly situated to a non-protected class, who suffered statistically disparit treatment, right?

A It's a very technical definition for that circumstance.

BERNARD R. SISKIN, Ph.D.

Q I'm just trying to get a vehicle to work with here.

A We can go over to -- I do a lot of work and analyze the question of what is a car worth, and the question is what is a similarly situated car, what is the value of the car?

The question of what are you defining as a similarly situated car, I can do that.

Q Fair enough.

In conducting the analysis of what is similarly situated it has to first be determined what the factors are, correct?

A Correct.

Q And the finder of fact, generally has substantial leeway in determining what those are?

MR. EPSTEIN: Objection. Calls for a legal conclusion.

A The definition of similarly situated ultimately has to be decided upon, because we don't get perfectly similarly situated data or enough data to be perfectly

your report you state, "That to assess a reasonable charge for a particular medical service one must --

A Which report?

Q Page five on your 2010 report. Exhibit 4.

Second full paragraph, "To assess a reasonable charge for a particular medical service one must rely on actual charges billed by similar providers for reasonably similar services performed for similar patients (age, et cetera) and a relevant geographic area."

Did I read that correctly?

A Yes.

Q Are those in fact the factors or the core factors that you believe have to be taken into account to assess a reasonable charge?

A They have to be similar providers in the sense that they are providing the same service and --

Q We will talk about each. I just want to know --

BERNARD R. SISKIN, Ph.D.

A Yeah, that is basically the four broad factors.

Q Now, are you an expert on what constitutes similarly situated medical providers?

A No.

Q Are you offering an expert opinion in this litigation on what constitutes similarly situated medical providers?

A I am offering an opinion as to what the assumption is under the Ingenix database and under most of the other databases, that is that the provider who provides the service is the same regardless of his skills, abilities, background, degree, years of experience, whether he is an M.D., a nurse practitioner, DO, whether he is board certified, non-board certified, whether he just graduated medical school, or been practicing for 20 years, the assumption is they are all fungible.

I don't believe that is a reasonable assumption. That's my opinion.

I'm not sure that's an expert opinion. But I'm offering, as a statistician, that that is the assumption that Ingenix makes.

Q And are you offering an expert opinion on what the proper factors are in determining what a similarly situated medical provider is?

A I offer an opinion that based on what I read, what I think most consumers would expect, that most people expect to pay different prices for a specialist then a non-specialist.

Most plans you can't just go to a specialist, you have to get approvals. If they are the same why can't you go to a specialist first.

A lot of things like that. Commonsense, and I would argue that logic tells you that quality of a person, you would expect to pay more for a specialist then a non-specialist, these are things which I would expect to effect.

Now the question as to whether they do, whether or not the decision-maker,

finder of fact, would believe that those are things that would matter, is ultimately the decision-makers.

Q Those are assumption to which you apply your statistical principals, correct?

A Correct.

Q But you are not here as an expert on what constitutes similarly situated medical providers, correct?

A Correct.

Q You are not here as an expert on what is sufficiently similar to constitute a specific medical market, correct?

A Correct.

MR. EPSTEIN: I object to that question.

A You mean the market area, geographic areas?

Q Yes.

A I have not offered an opinion as to -- and I have not studied as to how the markets would be defined.

Q You're not here today as an

expert on what should be taken into account in determining what is a similar medical service, correct?

A Correct.

Q Each of those determinations are questions of fact, correct?

A Fact. And judgment, in some cases. Fact in some cases.

Q Now --

A But --

Q -- let's talk about similar providers for a moment.

A few moments ago you laid out a number of different factors in terms of education and expertise and training, that in your experience you think should be taken into account or -- I'm sorry --

A Should be considered. I would say how much -- distinguish between them, okay, is there a difference between a board certified specialist and non-board certified specialist, does a consumer -- are the charges, for instance, of the board certified guy at Sloan Kettering different from a

yourself?

A With respect to that, no.

Q Were you speculating now based on the general notion of somebody with ten years more experience?

MR. EPSTEIN: Object to the form of the question.

A I would say that if you did a study you would probably find that there are factors related to the length of service of the person, which may affect price but it is probably not directly linked to service.

Q Now, if the 15-year practitioner had gone to a Caribbean medical school, and the five-year practitioner had gone to Harvard Medical School, how would that impact the analysis of whether or not they were similar?

A Probably through -- again, correlation, you are probably not going to find the guy who went to the Caribbean medical school and has no board certification at Sloan Kettering, you probably find the Harvard guy, who gets board certified in

oncology, he might be at Sloan Kettering.

So that if you -- if you are controlling for Sloan Kettering, you may be controlling for that factor, but if you are not controlling for Sloan Kettering and you don't care, then you are not really controlling for that factor.

Q Who is going to determine what you need to control for in determining who are similar providers?

A Somebody who does a pretty good detailed analysis of these type of characteristics, what's correlated, what affects the marketplace, what is similarly situated, what affects the medical process.

Q Are these people who are expert in the medical area?

A Typically a team. Experts in the medical area, statisticians, economists.

Q You haven't done it, correct?

A I was not interested in doing it. I turned it down when I was offered an opportunity to be part of the team.

Q You didn't do it in issuing any

of your reports in any of these lawsuits, correct?

A I never argued that I have defined appropriate UCR. I'm just saying consistently that what's produced is not appropriate UCR.

Q My question --

MR. EPSTEIN: Don't interrupt him.

Q Are you done, sir?

A Yes.

Q My question now is, have you ever determined what factors should be taken into account in determining who is a similar provider?

A Other than the broad characteristics I listed here, no.

Q Have you ever determined what the methodology would be to make those determinations, other than putting a team of experts together to do it?

A No.

Q Have you ever determined how many different factors would need to be taken

into account in determining who similar providers are?

A No, that is what would come out of the study.

Q Do you have any estimate or sense of how many factors would be involved, based on your years of work in this area?

A I think the factors that I listed are the factors that would come out.

How many variables you would need to control for to control for those factors, I don't have an opinion.

Q The factors you identified you identified through your own life experience and through discussions with various people and your reading, correct?

A Correct.

Q When you talked about impacts on pricing, of various factors in determining who are similar providers, what pricing would you be analyzing provider characteristics against?

A Well, you're looking at the normal pricing that the doctor is going to

charge.

Q How do you determine that?

A By what they are billing.

Q How do you determine that for purposes of this study?

A I don't understand the question.

How do you determine what they are billing? If you can get the records you know what they billed.

Q How many physicians do you need to gather these materials from in order to do that study?

A I have -- I don't know what the available data is, whether you have to collect original data or there is existing data you can tap into.

Q This would be left to the team that would be created?

A If you do the study that is the type of questions one does if one is going to do the study.

Q Do you have in mind any methodology for gathering that information?

A Other than the two general

BERNARD R. SISKIN, Ph.D.

THE VIDEOGRAPHER: This begins tape number four. The time is 1:09 p.m. Back on the record.

Q Dr. Siskin, directing your attention to the first factor that you state should be taken into account in determining reasonably similar services.

Are you offering an expert opinion on what constitutes significant differences among provider qualifications?

A No. I think -- one of the things which might clear up, if you go back to the first report that I wrote, which is one, where I actually spent more time discussing the concept of similarly situated.

And you turn to page eight, I think we get a more reasonable discussion, because it is a little broader. I spent more time writing on this issue.

The first paragraph talks about that it is necessary to why you need similarly situated and reasonably expected to be similarly situated.

And at the bottom I start

talking about the factors, requires key factors such as, and these are illustrations of the key factors, such as.

You -- maybe I poorly worded it here, interpreting these as being the factors and what I'm proposing, what I really was saying is these are the key type of factors one would have to consider.

Q Without attempting to be all-inclusive, correct?

A Or all -- correct.

These are the things that one would study, or things that would one expect one would need to consider if one is going to determine or claim that your data is doing UCR.

Q Who would make the final determination as to what factors, such as these, would in fact be studied in determining UCR?

A I'm not sure I can answer that.

As I said, if you are going to do this from scratch, and do this, as I said, it would be done similarly with a team of

experts who would be looking at -- looking at the subject matter of expertise, plus the data expertise, to try to come up with what really does relate and what you do have to consider.

The ultimate decision as to whether or not they are successful or not successful, may ultimately be in the eyes of the beholder. And, therefore, comes -- what we have been calling the proverbial decision-maker.

Q Finder of fact, the judge or the jury?

A Right.

Q And in the different factors you laid out on page eight, you are not offering as part -- excuse me, I'm now referring to page eight of your 2004 report, in setting those factors out you are not opining that these necessarily are the factors to be taken into account, this is simply illustrative based on your life experience and your reading as to the types of things that might be taken into account?

A Correct. And more importantly, these are the type of things that just are ignored totally in the existing methodology.

Q What should be taken into account you don't have an expert opinion on, you would leave that to the team of experts that you would have do the final analysis?

A Well, it would be my opinion that it would be some of these, at least.

Q But you are not an expert as to which of these factors would be involved in determining UCR, correct?

A Ultimately, which would be the final designation?

Q Yes.

A Correct.

Q By the way, on page eight you talk about the location of the procedure as one of the factors, do you see that?

A Yes.

Q How does the place of service or location of procedure impact the UCR rate for the person providing it?

A Well, it's possible that --

view this from the consumer viewpoint, okay.

I would say from looking at something, and I want to say okay, this is reasonably similarly situated and there is a variation so we can define what is the usual distribution, we can then pick out what are the statistical outliers.

If you can't do that then you can't define. If your distribution isn't appropriate, then you can't define what is usual and what is really an outlier.

Q Do you mean -- do you in this case mean anything else by the term UCR?

MR. EPSTEIN: Object to the form of the question.

A No.

Q The third element that you discuss as a potential reference point are similar patients, do you see that on page five of Exhibit 4?

A Yes.

Q And again, you are not an expert on what constitutes similar patients for various medical services, correct?

BERNARD R. SISKIN, Ph.D.

MR. EPSTEIN: Objection. Any question that begins with "again" repeats prior questions, and I'm asking you not to repeat questions over and over again, it's becoming harassing.

Object to the form as well.

A What was the question again?

Q I'll ask it again.

MR. EPSTEIN: You didn't have to ask it again the first time, you are repeating the question.

MR. DOREN: We would have been off the topic by now. This isn't going towards the eight hours debating with you.

Q Dr. Siskin, you are not holding yourself out here as an expert in determining the factors in what is a similar patient for a particular medical service, are you?

MR. EPSTEIN: Objection to the form.

Q You are not?

A Correct.

Q And again, these determinations

would be made by the team of experts that would need to be put together to make these sorts of determinations?

MR. EPSTEIN: Objection to the form. Asked and answered maybe five times.

A These are the type of things somebody would have to consider. I assume somebody would be appropriately the team of knowledgeable experts.

Q Do you have any other methodology in mind?

MR. EPSTEIN: Object to the form.

A No.

Q Are similar patients or the determination of whether two patients are similar; do you have a view as to whether that should be done from the view of the patient or the view of the physician or provider?

A Well, I really don't have a view one way or the other, except that I know that they themselves put modifiers to distinguish

BERNARD R. SISKIN, Ph.D.

Q Does that factor in to what you believe the evaluation of a reasonable and customary fee for that professional athlete's surgeon would be?

A No, but it would probably be correlated with -- might be correlated with the type of billings that take place.

Q Looking back on page five of Exhibit 4, following the reference to similar patients, you speak to "in a relevant geographic area", do you see that?

A Yes.

Q Now are you drawing a distinction between relevant geographic areas and medical market areas?

A No.

Q They are one in the same?

A Yes, I meant them to be the same.

Q Let's look to your 2004 report for a moment, which has been marked as Exhibit 1.

I would like to direct your attention to page 10 of that report, and

specifically the paragraph at the bottom of page 10.

Do you have that in front of you?

A Yes.

Q The paragraph states that, "If two unlike distributions of similarly situated charges are combined, the methodological flaw combining like and unlike charges in establishing UCR for a particular service results in all those in the higher price distribution who are affected by a UCR calculation receiving less than they should.

In every case combining unlike charges to establish UCR causes those persons from the higher distribution for that particular service to receive less than they should."

Did I read that correctly?

A That's correct.

Q Does that accurately reflect your opinion?

A Yes.

Q When two unlike distributions of

similarly situated charges are combined, is the person in the lower distribution made worse off by having their charges combined with those from the higher distribution?

A No.

Q In fact, persons in the lower distribution may be better off when their charges are combined with the --

MR. EPSTEIN: Object to the form of the question. No definition of "better off".

A Well, it depends. For people that are getting billed services, they are getting billed services. I'm not sure how you define "better off".

For people that were not getting billed services, okay, I don't know how you define "better off" either.

If I knew the full distributions and so forth -- I mean, essentially it is a mathematical question.

If I'm going to redraw the line for each distribution and that is the value, other people who are going to now -- who

before would have been above the line are now less above the line or below the line, the answer is yes, obviously.

Q So let's see if we can clear it up since everyone is so confused by the term "better off".

When two distributions are combined?

A Right.

Q Referring now to those in the lower distribution?

A Right.

Q Would the 80th percentile of the lower distribution rise when that distribution is combined with a higher distribution?

A If I have two perfectly similarly situated distributions, okay, and I merge them, the 80 percent line for the top distribution goes to the right, the 80 percent for the bottom distribution goes to the left.

Q So in that circumstance, if someone in the lower distribution was not

receiving billed charges, they were being paid at the 80th percentile, which was less than their billed charge?

A Right.

Q When their distribution is combined with a higher distribution, then the 80th percentile for that lower distribution would move to a higher reimbursement amount, correct?

MR. EPSTEIN: Object to the form.

A Repeat it, because I think you inverted it.

Q Hope not. We better be careful.

Assume a separate distribution of what we are now calling the lower distribution, and someone who is not receiving a full bill charges, they are being paid at the 80th percentile of that distribution, all right?

A Right.

Q That distribution is then combined with a higher distribution, a second distribution, so you now have the bimodal

distribution, all right?

MR. EPSTEIN: Object to the form.

A Are we going in the reverse? You said they are not combined first.

Q Right.

A They are not combined first, everybody is getting the 80th percentile of the distribution.

Q That's right.

A Now you are combining.

Q Right. And the 80th percentile in the lower distribution --

A Moves to the right.

Q Rises?

A Correct.

Q And so the provider in the lower distribution, who is being paid at the 80th percentile, will still be paid at the 80th percentile but it will be a higher number, correct?

MR. EPSTEIN: Object to the form of the question.

A Was paid at the 80th percentile,

may not be, he may be paid a bill charges.

Q Right. In other words, if his bill charges are now covered, because the 80th percentile has risen he will be paid a bill charges?

A Correct.

Q If on the other hand his bill charge is beyond the 80th percentile either as a separate distribution or as a combined distribution --

A Let's get away from charges, it's where he falls. Let me make this simple.

Q I appreciate that.

A If you are just drawing the lines, somebody that was below the line in the lower distribution, when you combine it will still be below the line.

Somebody that was above the line is either going to still stay above the line but will be closer to the line, or fall below the line. That is mathematical.

Q Going back to your scenario, where you have two combined distributions,

one high, one low, and then you separate them, the person in the lower distribution who is not being paid billed charges will be worse off, correct?

MR. EPSTEIN: Object to the form of the question.

A This is --

Q If you have two distributions --

A I have two distributions. Now you wants to combine them or start with them combined?

Q Start with them combined. Two distributions combined?

A Right.

Q A lower distribution and a higher distribution?

A Right.

Q If those two distributions are separated --

A Correct.

Q -- the 80th percentile in the lower distribution will decrease, correct?

A Correct.

Q And, therefore, anyone who is

being reimbursed at the 80th percentile in the lower distribution, once that is separated from the higher distribution, if that person is reimbursed at the 80th percentile they will receive less money, correct?

MR. EPSTEIN: Object to the form of the question.

A Putting aside the question of less money, if you are at the 80th percentile, separate it at the 80th percentile, will be a lower number.

Q And as we disaggregate these various factors that you talked about in your report, in terms of qualifications and location and patients and services and all, it would hypothetically lead to a variety of distributions, one for each of those factors, correct?

MR. EPSTEIN: I object to the form of the question.

A Correct.

Q And how those various distributions intersect, and where the 80th

percentile of those distributions would be for any individual provider, depending on their combination of those factors, versus the 80th percentile for a particular CPT code in a particular geo zip under the current Ingenix database, would be a fact to specific determination, correct?

MR. EPSTEIN: Object to the form.

A Where the 80th percentile would be in each of those distributions?

Q Yes.

A I'm not quite sure what you are essentially saying.

It goes back, and I think I answered this in beginning; if you have the real UCR's for all these people, you would know exactly who -- what would happen if that had been used, as opposed to what was used, okay?

And to the extent that you are separating distributions, you don't know what is going to happen because you don't -- you know, you don't know.

A No.

Q What sort of data editing is appropriate?

A Data editing is appropriate to remove the data points which are in error.

The wrong CPT code, keypunch error, recorded the wrong price, they are in the wrong zip code, the basic data is incorrect.

Q Is it also appropriate to delete duplicate claims from contribution data?

A Duplicate claims are errors, yes of course.

Q Now, page 16 of your 2010 report, which is Exhibit 4, you identify in bold at the top certain Aetna profiling rules, do you see that?

A Yes.

Q Did you review all of the Aetna profiling rules before identifying these as the ones pertinent to your opinions?

A As I pointed out here, let's simplify this a little bit, these are the ones which seemed profiling -- as I put in

prevailing will be reduced and not profiled with action code 617 or 657', do you see that?" Answer, "Yes, I do."

Question, "Do you have an understanding as to how Aetna has applied that rule at any time between 1998 and December 31, 2004?" Answer, "I believe that to just be a terminology error in a manual. That is not what is happening in the system."

Question, "And have you looked -- what is the basis for your understanding that this is a terminology error, as you put it?" Answer, "We check. I checked with someone involved with the systems and they looked at claim activity and told me that it is not what is happening."

Question, "Who is the person you say you checked with?" Answer, "Her name is Anna Chavez." Question, "What is it that made you go check with Anna Chavez about the automated profiling guidelines appearing on McCoy/Aetna 002?" Answer, "That it's not been our practice to not profile charges that exceed prevailing, and so I was concerned. I

wanted to make sure that that wasn't what was happening in the system."

Did I read that correctly?

A Yes.

Q So as of April 2005, the Plaintiffs in this case had clear testimony from Ms. Justo that it was her belief that there was no profiling automatically of claims reduced by R&C, correct?

MR. EPSTEIN: I object to the form of the question. Mischaracterizes what you just read, in terms of clear testimony, from Ms. Justo.

A I can only say that I don't believe I ever saw this.

Q And again, with Ms. Chilcott, that same month, April 2005, Plaintiffs in this case received clear testimony in her statement that "We profile all charges regardless of a prevailing fee limitation", in terms of the auto adjudication rules, correct?

MR. EPSTEIN: Objection to the form. Asked and answered.

BERNARD R. SISKIN, Ph.D.

Mischaracterizes the testimony.

A I don't remember the question.

Q Sure. The question is --

A As I said, I don't believe I saw that. I probably saw the documents they are talking about, that is why I wrote what I wrote.

Q Now, if we can go back, please, to Exhibit 4 -- I apologize, back to Exhibit 5, April 10, 2008 transcript on page 22, and at page 22, line 8, you testified to Judge Hochberg that "Aetna testified in a deposition that they had a process and part of that process for their electronic data, which was most of their data, if the charge was less than -- was greater than they actually paid was screened out and not sent out."

As you sit here today do you believe that you saw such a deposition?

A I probably saw the exhibit which was attached to that deposition, which showed that they screened it out.

Q But you never saw the testimony,

BERNARD R. SISKIN, Ph.D.

correct?

MR. EPSTEIN: Objection.

A I don't recall at this time if there is other testimony. I would have to go through -- see the excerpts that were sent to see if there is direct testimony that says that. It's possible that there is something that says it in the deposition that I was shown.

Q Dr. Siskin, I would like you to assume that I have shown you the testimony from those two depositions that address whether or not these two witnesses believed that Aetna was applying any sort of automated scrubbing of claims above the 80th percentile.

If that is the case, is a true statement that Aetna testified in a deposition that they had a process, and part of that process for their electronic data, which was most of their data, if the charge was greater than what they actually paid, it was screened out and not sent out?

MR. EPSTEIN: I object to the

form of the question. Incomplete hypothetical. Omits documents, and other material that exist with regard to the issue of profiling and, therefore, is an unfair question.

A Sitting here today, without having gone through the depositions, I can't answer that question.

There may have been a question that I was asked, is the this profiling rules and the answer is these are the profiling rules, and that is what I was shown, in which case there would be something in the deposition which says they screened it out.

Now, if you are asking me if I read and checked the whole testimony fully would I have said this, the answer is no. If that's the case, and I would have gone further, as an explained.

Q And had you read the testimony contained in Exhibits 12 and 13, in this deposition, the testimony of Ms. Chilcott and Ms. Justo, prior to testifying under oath to the court in April 2008, what would you have

done instead?

A Depending upon the rest of it, I would have done -- first of all, I probably wouldn't have testified to that, but I would have done what I said in here, that there is a dispute as to whether or not -- if I couldn't resolve it, I would have said there is a dispute as to whether or not they did this type of profiling.

Q So based on the testimony I have shown you, do you agree that the statement that Aetna testified in a deposition that they had scrubbed out all high charges is an inaccurate statement?

A No, but it's not a complete statement at best.

I would say -- because again, without the deposition we are not resolving -- but from what you showed me I would have clearly said there is -- most I would have said is there is a dispute as to whether; the rules say this but they are saying the rules weren't followed, and there maybe a debate over whether that is true or not. I don't

know.

Q Who did you rely upon in preparing for your testimony in the hearing in April 2008, and the basis for the testimony that you would give?

MR. EPSTEIN: Objection, form of the question.

A I said I was sent the profiling rules which said that clearly. Excerpts from the deposition, I saw -- I don't recall ever seeing those documents. I would not have testified that if I had seen those documents.

Q You received those excerpts from counsel, correct?

A Correct.

MR. EPSTEIN: Objection, there is nothing in the record that excerpts were sent.

MR. PAPPAS: It is in his report, Mr. Epstein.

(Whereupon, Siskin 14, Staff Report for Chairman Rockefeller, June 24, 2009, was marked by the reporter for identification.)

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Q Dr. Siskin, had you seen the testimony contained in Exhibit 12 and 13, prior to issuing your June 2006 report you would have included qualified statement in that report as well, correct?

A As I answered, I would have explored, and if I couldn't explore it and couldn't resolve it I would have put in a qualifying statement.

Q I would like to show you, and I will focus you, I won't make you look through the whole thing, a copy of the staff report for Chairman Rockefeller, dated June 24, 2009, for the Committee on Commerce Science and Transportation, Siskin Exhibit 14.

Feel free to familiarize yourself with it, but I would like to direct your attention to page six.

You will see the sentence mid-way through the paragraph, "In an expert report submitted to a New Jersey Federal Court in 2006, a statistical expert testified that insurance companies do not contribute complete sets of their medical claims data to

are fine.

MR. EPSTEIN: Really? Let the witness answer the questions, and don't editorialize.

A I was saying this is an illustration that I gave of a case where it could remove it, and these are cases where there are extremes on the high end, he is using extremes on the low end. It's fair.

Q And Dr. Siskin, under this methodology, depending on the data which it applied, the 80th percentile value can be higher than without the common scrubber, correct?

A The scrub data could be higher, yes.

Q So depending on the characteristics of a particular distribution, the impact of the common scrubber may be that some high charges may be removed, correct?

A Let's backtrack.

The implications of the common scrubber, the way it is used, is that the technique does not meet statistical

correction -- calculation, because it doesn't adjust for the difference in the variance.

The technique does not focus on the specific validity of the charge or invalidity of the charge.

Given that, the application of this procedure, as I note, could go in either direction.

As I noted, in terms of taking a high and low charges, okay, you have to take out more low charges than high charges to get the system to average out, but it could occur, as I pointed out.

Q So again, with the application of the common scrubber, the data sets, some data distributions maybe eliminated, correct?

A Correct.

Q And in some distributions no high charges would be removed?

A Correct.

Q And in some instances the 80th percentile may go down, correct?

A The 80th percentile reported by Ingenix would go down, right.

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Q And in some instances that 80th percentile may not move at all?

A Correct.

Q And in other instances that 80th percentile may move up, correct?

A From the scrubbing? Correct. In those cases would it be correct? Potentially. You don't know.

MR. EPSTEIN: I think you got that wrong. Could you repeat your last answer.

A I said since we don't know whether any of the charges being removed are left and are valid, we don't know what the real answer should be.

Q That is a lot more words then I heard. Dr. Siskin, let me just ask the question again.

In some instances through application of the common scrubber, the 80th percentile in Ingenix can move up, correct?

A Correct.

MR. EPSTEIN: Let him finish his answer.

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MR. DOREN: He is done. We had five seconds of silence.

MR. EPSTEIN: I want to correct the record.

MR. DOREN: You can redirect if you'd like, Barry.

MR. EPSTEIN: While we are still here and everybody is thinking about it, I want to correct the record.

MR. SIMON: I object to this. You have an opportunity to redirect after we are all done.

MR. PELL: This was done by you at a deposition and --

MR. SIMON: Never.

MR. PELL: You are wrong. It is a palpable error. Let him say his peace and then you can object.

MR. EPSTEIN: He said the word "no" and the reporter heard it as "those", and that is the one I want -- you have the word "those" in it, read it back to Dr. Siskin and see if he agrees.

We can do it while the record is

fresh.

(The record was read.)

A In those cases you wouldn't know whether -- it may or may not be correct.

You don't know, because, as I was explaining, because you don't know whether you are moving valid charges either on the high or low side, so when it changes you never know whether what you are getting is the right answer or the wrong answer, because you are removing data statistically, as opposed to removing invalid charges.

Q Anything else?

A I think that was the point I was trying to make, not too eloquently.

Q Got it all out? Few more minutes to reflect?

A I think that should do it.

Q Excellent.

Let's turn to page 22 and 23 of your report, my apologies, 24 and 25 of your report.

On these pages you discuss a claim involving a person named Jill Faddis,

correct?

A Right.

Q Is this the one instance where you have evaluated what you believe to be an actual claim?

A I didn't, Carla Gee did.

Q But you reviewed the materials related to this claim?

A Correct.

Q Have you reviewed any materials related to any other actual claims?

A No.

Q What is the source of your knowledge regarding Ms. Faddis' claim?

A I was given -- I don't remember what it was, deposition testimony or information concerning the claim, other review.

(Whereupon, Siskin 16, Document, Bates stamped Cooper AET 03521 through 03536, was marked by the reporter for identification.)

Q Let me show you what was marked as Exhibit 16, which was previously marked as

BERNARD SISKIN, Ph.D.

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY

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DARLERY FRANCO, et al.,

Plaintiffs,

- against - CASE NO. 07-CV-6039(SRC)(PS)

CONNECTICUT GENERAL LIFE
INSURANCE CO., et al.,

Defendants.

----------X

In Re:

AETNA UCR LITIGATION
MDL NO. 2020

Master File No.
2:07-CV-3541

----------X

VIDEOTAPED DEPOSITION OF BERNARD SISKIN, Ph.D.

New York, New York

Friday, May 14, 2010

REPORTED BY: BARBARA R. ZELTMAN
Professional Stenographic Reporter

all fungible. They are all identical. I wouldn't expect one to be higher than the other except for the random trust. They're all comparable.

That's the basic assumption that that requires. Doesn't matter whether there's modifier on there or not a modifier. None of that matter. Doesn't matter whether it's done by a cardiologist, by the GP, general practitioner or nurse practitioner, doesn't matter. They are all comparable. That's the assumption you are making if you are going to do that type of analysis.

I say I don't think that's reasonable from a consumer viewpoint.

I know I wouldn't expect that. I've been asked to study in other areas these types of questions. I don't think that's reasonable.

I would then say I have done some research in general literature, et cetera, and there seem be

characteristics that one would normally think about, that is, the quality of the provider, the characteristics of the provider.

Q Are you finished?

A The complexity of as indicated by the modifiers. I'm not so sure a geo zip code is an appropriate market area.

These are all things that one should be considering or one would think one would consider to develop a reasonable definition of usual and customary.

Now, at that point, I say I'm not the expert to be able to determine all the factors that you really should control for. That really requires combination of looking at the statistics, looking at the data and talking to experts and telling you what things you might consider.

And that's my opinion.

Q That's fair enough.

All I wanted to do was try to

get to some of the factors that you think may or should possibly be taken into account in coming up with a true UCR, things like provider qualification.

MR. EPSTEIN: Objection to the form.

Q All right.

So going through your report, one of the things that you said maybe should be taken into account is the patients' --

A No, should be considered.

Q Should be considered is patients' age, right?

A To the extent that the patient's age represents a complication or represents an issue, yes. That's obviously one of the -- I think generally my gut feel in that is that may show up realistically in the modifiers. But that is the type of thing we're talking about, which is we're talking about the complexity of the case for the patient.

some part overlap, but please try to refrain from asking the same questions that were asked yesterday.

Q Dr. Siskin, what I'm trying to isolate is just the effect of patient's age.

A You can't do that.

Q Well --

A Because the question is do you have a valid, true UCR.

The answer is no.

And you want to say what the question is, if you had a true UCR, fine, give me a true UCR and I'll be able to answer your question. I don't know what the true UCR is. You can use age, that doesn't get you the true UCR.

I'm not looking at each individual characterization in isolation, that's not the question.

That's like saying gee, I'm going to put all the cars together in one pool. One of the problems is you didn't

consider year. Oh, okay, now we're supposed to consider year so we'll put a Mercedes together with a Ford but we'll control for year. Does it have an effect? That's meaningless. The question is what's the real value for the car and then I would know what the impact is.

So what I'm saying -- I understand your point. I don't know what the true UCR is. If you give me the true UCR, I'll be able to answer your question.

If you are asking me whether or not if I did the true UCR in every case the true UCR would be higher? I'm not saying that.

Q And you are not saying that in every case the true UCR would be different from the actual UCR that CIGNA applied; is that right?

MR. EPSTEIN: Objection.

A It's not always higher. It's either the same or lower.

BERNARD SISKIN, Ph.D.

MR. EPSTEIN: That's asked and answered several times.

Q So for any class member the true UCR may be higher, lower or the same as the UCR that CIGNA paid; is that right?

MR. EPSTEIN: Objection as to form of the question. Assumes something not in evidence, the "true UCR" which is just the subject of this testimony.

Q Is that right? You don't know whether the true UCR would be higher, lower or the same as what CIGNA paid?

A Using the true UCR and I could answer that question.

Q But sitting here today, you could not tell me whether the true UCR for any CIGNA class member would be higher, lower or the same as the UCR that CIGNA actually paid; is that right?

MR. EPSTEIN: Hold. Object to the question.

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It's been asked and answered and I believe that at this point, you know, we'll allow this one, but you cannot keep asking the same question especially when it was asked several times yesterday.

MR. BERGER: I don't remember.

A I think that same question was asked yesterday with the exception it was AETNA instead of CIGNA, and I would say the same answer applies but wherever I said AETNA substitute CIGNA.

Q What was that answer?

MR. EPSTEIN: Objection to the form.

A The answer was essentially what I just said 14 times, that I have looked at this data. There is no valid UCR, I don't know what the valid UCR is. If you give me the UCR, I could answer the question.

Do I know -- I know based on what I've seen and based on the problems, I would assume that the tendencies would

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be such, so I would estimate probabilities as I went through that whole thing yesterday. But I do know for any specific case, the answer is no.

Q And so it's fair to say that you cannot give the opinion that the Ingenix database systematically for every class member resulted in the payment of a UCR amount that was lower than a true UCR?

MR. EPSTEIN: Objection to the form. Asked and answered.

Q Is that correct?

A I think I've said 14 times, since I don't know the true UCR, I can't make that statement.

Q Okay.

Let's turn to Page 5 of Exhibit 18. It's the section with the heading Method Reviewed.

Do you see that?

A Yes.

Q And you say "In evaluating the Ingenix databases, I considered the

following general principles.

"Number 1, The stated purpose for the data, e.g., any relevant or other definition."

Do you see that?

A Yes.

Q What do you mean by that?

A The purpose of the data was to produce a distribution similar to try to be able to determine -- so you have a distribution of charges so one can determine what one wants to consider usual and what one wants to consider unusual within that distribution within the concept of UCR.

Q How did you determine that that was the purpose of the data?

A Having read what it was and all the original Ingenix data and pending a lot of depositions of the high, the original definition of the high, what the purpose of that was when it was originally produced.

I remember going through -- I

CPT code, other than the minor exception we talked about, by definition, you never investigated, analyzed or performed any test to determine whether any of the releases of the PHCS database was based upon data that was representative of the total population of provider charges, correct?

MR. EPSTEIN: Objection to the form.

A If your question is do I know that the convenience sample did not wind up to be actually representative of the population, no, I do not know that.

Q And you did not perform any --

A I'm not sure how you would do that. Statistically, the way you would normally do it is more looking at what data you didn't get. You'd know which contributors didn't supply data. You can look at, to the extent the contributors didn't supply their full sets of data, to get a feel for whether you think there's bias in that process.

In the sense of creating a bias data set.

Q Now, you can also design a scientifically -- you could also -- withdrawn.

You could also create a scientifically designed random sample of provider charge data in a particular geographic area, could you not?

MR. EPSTEIN: Objection to the form.

A Would not be that easy but yes, theoretically you could do that.

Q And you did not design such a scientifically designed random sample of providers in order to ascertain what would be the charges in any particular area, correct?

A That's correct.

Q Now, assuming, as you've stated in your report, for sake of argument that you are correct that the underlying data and PHCS was intended to be a convenience sample, the very fact that

data is obtained by way of a convenience sample does not mean that the data is not representative of the underlying population of provider charges or is biased in any way, correct?

MR. EPSTEIN: Objection to the form.

A I would agree, with you it clearly does not mean that it is. So therefore, it's a burden of proof question.

The reliance that it is representative on that sample is -- statistically you wouldn't go that way. That's like saying I'll just take ten people on the street and then I've got to prove that any of those ten people's opinions doesn't match opinions of the United States.

Generally we don't do that. We just say there's no reason to believe that that sample, which would be a convenience sample, would be representative.

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Now, I can't prove that it's not but I wouldn't rely upon it and I wouldn't tell people as a statistician not to rely on that data.

Q You don't know either way, Dr. Siskin.

A No.

Q And you would have to test it in order to have knowledge either way whether it was or it was not, correct?

MR. EPSTEIN: Objection to the form. Assumes a burden.

A That's what I said. I agree. But as a statistician we know if you take a valid probability sampling, you can rely upon it with known things.

If you take a judgment sample, I will ask you and the user of that judgment should explain why he thinks that's representative. And then you can make an assessment of that.

If you take a convenience sample, okay, there's no judgment involved to say that it's going to be typical. So

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therefore as a statistician, in order to tell you unless you have a reason to believe so, you don't rely upon that. There's no reason to believe that that's going to be by definition representative of a population.

Q That's a different question. My only question to you was: In order to ascertain whether it is or isn't representative, one must test it, correct?

A Correct. I agree with that.

Q Sitting here today, Doctor, you don't know whether any particular CPT code, geo zip or release is representative or biased in any way because you didn't test it?

MR. EPSTEIN: Objection to the form.

A I think you are -- I agree with that statement. But unless I know what the true UCR is, I can't test the answer. By chance somebody can just pick a number and it could be the true

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UCR or not the true UCR. So I don't know where that standard gets you anywhere.

MR. PAPPAS: I think we're close to the end of the tape. Why don't we take a short break to change the tape.

(Pause to change tape.)

THE VIDEOGRAPHER: This begins Tape Number 4. The time is 1:38 p.m. Back on the record.

BY MR. PAPPAS:

Q Dr. Siskin, yesterday you explained what you meant by the term "UCR" when you used that term in your expert report, correct?

A Correct.

Q And it is your opinion that Aetna failed to reimburse its health plan members at UCR, as you understand that term, because the PHCS database does not satisfy UCR, as you testified yesterday, correct?

you just gave here?

A Not specifically. But you asked, do I think it exists in writing?

I think you would find one of those plans that would fit that definition that I gave. You could find a definition.

I think they all infer that it is the definition, but that's a legal question. But that's that statistical definition that I was using.

Q Isn't it accurate, Dr. Siskin, that the concept of UCR that you just testified to, and as you testified to yesterday, is a product of your own reasoning and what you believe consumers would expect to be reimbursed, rather than some description in a contract or a plan or some legal standard?

MR. EPSTEIN: Objection. Asked and answered.

A No.

Q Why do you say "No"?

A For all the reasons I've given

for the last day and a half.

I believe that if you accept that the Ingenix database represents UCR, then you have to accept -- if you're saying usual provider charges, that all providers are the same, regardless of their qualifications; all the services are the same, regardless of the provider or the patient characteristics and modifiers, you'd have to believe that a geo zip appropriately defines a medical market area. I don't think that is true.

Now, what I've said is -- this portion is mine -- that given these type of characteristics, it seems me that the factors that one would have to consider to define an appropriate UCR are the factors I've laid out.

And to that extent, those factors that I laid out, I think, are based on my reading of them as a consumer, in reading of the medical literature and reading the literature, that these are

the type of factors that one would normally think of controlling for.

But as I pointed out, you know, they may be added to or subtracted to on the basis of other medical expertise, or they may be added to or subtracted to based on empirical data.

Q You agree that it's a legal question as to what these plan standards require, correct?

A Yes.

Q And you've already testified you've not studied the contents of such plans or their definitions, correct?

MR. EPSTEIN: Objection to the form.

You're asking him to memorize whatever he's testified in the past, and then it would be asked and answered.

THE WITNESS: Can you read back the question?

Q You've not studied the contents of the employee benefit plans or their

Exhibit 10

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY

IN RE: AETNA UCR LITIGATION,

This Transcript Relates to:
ALL CASES

) MDL NO. 2020
) MASTER FILE NO.
) 2:07-CV-3541
) (FSH)(PS)

VIDEOTAPED
EXAMINATION
BEFORE TRIAL
OF
DR. BERNARD
SISKIN

TRANSCRIPT of testimony as taken by and before MARK SCHAFFER, a Certified Shorthand Reporter and Notary Public of the States of New Jersey and New York, at the offices of Sills Cummis, LLC, 1 Riverfront Plaza, Newark, New Jersey on Tuesday, December 14, 2010, commencing at 10:03 in the forenoon.

Job No. NJ301250

sampling procedure that's used is not a statistical sample. It cannot be used to infer -- because it is not a statistical sample, it cannot be used to infer anything about the population. So for what they're doing, which is presenting data in its very limited sense, you can't really infer that it's representative in any stretch of the population for which it's being reported for.

And this is consistent with statistical theory and consistent with Ingenix's own experts, and consistent with Ingenix's own personnel, this feeling.

The editing and data estimations, as I explained before, I think is incorrect. Okay? It's incorrect for two reasons, which makes it unreliable. Okay? That is: It removes data without any justification that it really is high. It's like coming into a discrimination case and taking out outliers and throwing them without studying them and saying there is no problem, because it goes away.

That is known as throwing the baby out with the bath water, and I know of no case where you wouldn't have to actually look at them and conclude that they really are errors, as opposed to valid measures of discrimination in the data.

There is a second problem which I pointed

out, which is the methodology for combining data, which is statistically incorrect. Because of that, I think the database that's produced can't be used reliably. From a statistical viewpoint, it is not reliable statistical data that one can use to estimate anything about the population. That's what the point was.

So I eliminated the upward bias and downward bias, because it's really not relevant and it raised more confusion than it was worth.

Q. Are you done?

A. And I eliminated Footnote 1.

Q. Now are you done?

A. Yes.

Q. So it's your opinion as you sit here today that the first bullet point in your August report more clearly states your opinion than the first bullet point in your April, 2010 report; correct?

A. Correct.

Q. And the only two changes made in the first bullet point in August, 2010 was to remove the word "downward" after "bias" and to eliminate Footnote 1; correct?

A. Correct.

Q. Correct?

A. Correct.

Q. And you eliminated the word "downward" after "bias" because, in fact, it's your opinion that the bias may be upward or it may be downward; correct?

A. No.

Q. Why did you remove the word "downward"?

A. I think the bias is downward. I think all the data shows that it is, in fact, downward. I eliminated it for two reasons. Because you keep saying and I agree with this confusion, in some cases it's up, in some cases it's down. That's not from a statistician's viewpoint relevant. Because if I have a coin and it's biased, it means I'd expect to get more heads than tails. But sometimes when I flip the coin, I get more tails than heads.

So when I say it's biased, it doesn't mean in every single case, I'm going to get more heads than tails. So it doesn't mean every single CPT code of every single time I do this, I get more heads than tails. But when I talk about bias, the procedure will tend on average, expected, to go downward. All the data I've seen shows that that is, in fact, the case.

More importantly, I removed it because it's not relevant in a sense to what I'm saying. I'm saying: You just can't use this database. Okay?

From a statistical viewpoint, it doesn't meet any of the standards of a statistical database for which someone can rely upon.

And that's because it is not a statistical sample. If you don't have a statistical sample, you can't infer anything about a population. Okay? And if you need data which is going to infer about a population, you can't do it. If you do procedures which are incorrect, you can't know whether your answers are end good or not. So, therefore, the data is unreliable; you can't tell what the right answer is; and therefore you can't rely upon it.

Q. And you don't know as to any specific CPT code combination -- geozip combination as to whether that data is biased upward, biased downward or accurate; correct?

A. Correct. And if I can't -- if I can't tell whether it's biased upward, biased downward or accurate, then I won't rely upon it as a statistician. That's data you can't use.

Q. As a statistician; correct?

A. Correct. And that's what I'm testifying as, a statistician.

Q. And is that the only capacity you are testifying in?

A. Correct.

Q. Now, when you say that you believe on average the values are biased downward, what do you mean?

A. Well, I'm saying that if you look at the data that's been produced by the defendants' experts, the bias is downward. From their analysis. I'm not sure their analysis is correct. I'm not so sure it answers really the questions not necessarily -- not -- but they're offering it as evidence of lack of commonality of the results, that in some cases it goes up and some cases it goes down. And I don't disagree with that as a premise.

But if you look at them, they're disproportionately, when they change, going down; which is what we term, statisticians would call a downward bias to the estimation process.

Q. Other than what you've seen in defendants' expert reports, do you have any other basis for the view that on average, the Ingenix database is biased downward?

A. The other points that I raise in the reports, which are: If you are removing observations, the ratio of having to remove high and lows is going to work to the detriment in general of creating a downward bias. And the methodology for combining

incorrectly data, if you don't adjust for the variation, is going to tend theoretically to estimate downward.

Q. But you have done nothing to measure those theories in practice; correct?

A. No. As I said.

Q. Any other basis for your opinion?

A. The downward opinion?

Q. Yes.

A. No.

Q. Why did you remove Footnote 1?

A. Footnote 1 was badly worded and it was actually corrected.

Q. Why was it badly worded?

A. The "cognizant of this bias" was an incorrect statement.

(A discussion is held off the record.)

A. In that footnote, there is a statement, the beginning of the second sentence, it says "cognizant of this bias, Ingenix disclaims the use --"

(A discussion is held off the record.)

Q. And so because of your concerns about the second sentence in Footnote 1, you deleted the footnote altogether?

A. I didn't think it adds anything. When I

your August, 2010 report; correct?

A. I would agree with that, correct.

Q. The third sentence in your August, 2010 report states that "This method is inappropriate because it eliminates valid charges and biases the estimation of the percentiles reported."

Did I read that correctly?

A. Where are we? I lost you.

Q. Sorry. This is your August, 2010 report, which is Exhibit 28.

A. Okay.

Q. At Page 26.

A. Right.

Q. The top paragraph, and now the last sentence in that paragraph. And that statement says, "This method is inappropriate because it eliminates valid charges and biases the estimation of the percentiles reported." Correct?

A. Correct.

Q. And is that an accurate statement of your opinion as of today?

A. Yes, uh-huh.

Q. Referring back to your April, 2010 report, you stated that "This method is inappropriate because it eliminates valid high charges." Correct?

A. Correct.

Q. Do you believe that the statement in your August, 2010 report is more accurate than the statement in your April, 2010 report?

A. It's more conclusive. It's not more accurate. "This method is inappropriate because it eliminates valid high charges" is a correct statement. It is also correct that it is eliminating valid low charges and creates a bias in the results so that you can't rely upon them.

So since, again, in redoing this, since there is a major issue about -- in terms of whether it's always in one direction, I tried to get away from that issue to clarify everything, that I was never saying that.

Q. You were never saying that the Ingenix methodologies only biased the data --

MR. DOREN: Or strike that.

Q. You have never been opining that the Ingenix database is only biased downward; correct?

A. No, I never -- no. That's not what I'm saying. What I'm saying is -- I'm never saying that -- even when it's biased downward, that it affects every CPT code/geozip code, in that direction.

Q. That --

A. That a bias is the overall expected average; it doesn't mean uniformity.

Q. And you have no opinion on what percent of the time the Ingenix database is actually understated in terms of value percentiles for any particular CPT code or geozip combinations; correct?

A. I already answered this question. Again, within all those caveats I said before. In other words, there are some studies put forth by defendants' experts which I think on a preliminary basis clearly illustrate that there is a bias downward. I'm not so sure that that is necessarily the right answer in terms of the magnitudes, because you don't know the answer of what's valid that was eliminated. They really just tested -- no adjustments versus adjustments. And the adjustments result in a downward bias.

What would happen if you did it correctly, I don't know. My conclusion is simply that the methodology used makes this data just unreliable and they can't use it.

Q. So you have not formed any personal opinions as to the impact of what you regard as an unreliable methodology used by Ingenix as to CPT code/geozip combinations, any specific CPT code/geozip

a lot of alternatives. I have not studied the problem. I wasn't charged with this.

Q. Oh, I'm sorry. When you said it's a study, you mean it would be a study to sort out how to do it?

A. Correct.

Q. Is a representative sample of a population always necessary to draw statistical inferences about that population?

A. That the sample be representative?

Q. Yes.

A. Yeah.

Q. Do you consider all data scrubbing to be improper?

A. No.

Q. Do you agree that edits to account for invalid data are appropriate?

A. Yes.

Q. If a facility fee for supplies is included with a professional charge for a surgery, would it be appropriate to remove the facility component from a data set that is intended to compare professional fees for performing a surgery?

A. It would seem logical, yes.

Q. That's something that you as a statistician would think should be done?

A. If you are trying to -- to compare similarly situated services, I would think yes. Obviously a facility charge is different from a physician's charge.

Q. Now, in your opinion, is a data edit that removes all charges of one dollar or less for medical and surgical services as obvious errors an acceptable procedure?

A. My gut feel on that is yes, unless somebody would correct, I don't believe that professional services ever bill one dollar. And therefore I think you can conclude that that's a typo -- that's an input error.

(A discussion is held off the record.)

A. They're the type of audits which are consistency audits, which I think are reasonable to do.

Q. Is it necessary to take steps to eliminate invalid charges to -- to assure an unbiased sample?

A. I would have to consider the circumstances of that. That I would probably eliminate all the obviously unvalid -- you know, invalid charges immediately. That would be one thing I would do.

Q. As a statistician, do you consider that to be an appropriate first step?

A. Yes.

Q. And if the population of beta is too large to review manually, if you will, is it ever appropriate to use a formulaic scrubbing rule?

A. It depends on the circumstances. It depends what you are estimating. It depends what the purpose of the data is.

Q. Can you give me some examples of where it would be appropriate to use formulaic scrubbing rules?

A. If you are trying to estimate a average in a population, formulaic Windsorizing and truncating data is a common procedure, and that's fine. You can see what the effects are, because there, if you are estimating a mean, you don't want to be pulled by extreme values. On the other hand, you can leave it in and just do medians to get away from that problem, so there are options.

Q. Is it ever appropriate to use formulaic scrubbing rules for a large data set when you are calculating medians and percentiles?

A. Large data sets become small data sets when you break them down by geozip codes. And therefore you have a real problem of -- in percentiles, particularly high percentiles, just automatically eliminating data. Which may, in fact, be valid high

A. I don't know the answer to that yet.
Q. But your client considers it to be commercially reasonable; correct?
A. My client's the Court, so I don't know the answer to that question.
Q. Which Court?
A. I'm not at liberty to say.
Q. As an expert in this case, are you offering any opinions on the application of Aetna's contractual language regarding UCR determinations?
A. I'm not sure I answer -- understand that question.
Q. Are you offering any opinions on the application of Aetna's contractual language to its obligation in making any UCR determinations?
A. From a statistical viewpoint, of course.
Q. I'm sorry?
A. From a statistical viewpoint, of course. What I've done, as any statistician would do, is I've read the plain language of the plan and the -- what do you call them -- the descriptions you give the clients, the subscribers, what have you, and so forth, and I looked at that and said, okay, what data does that imply? You need to do that.
And then I conclude whether or not -- and, of

course, Ingenix data can't possibly meet that, what that says.

If you are asking me do I have a legal opinion as to what that statement should be, no. I'm not a lawyer.

Do I have an opinion as to how that should be written or what that should entail? No, I'm not saying that. I just take what's there, the plain language, try and interpret what it means, and then as a statistician, we do this all the time, try and operationalize what it means in terms of what data you need and answer the question whether the data exists to answer that question.

Q. Are you offering --

A. Or whether the data doesn't exist to answer that question.

Q. Are you offering any opinions on what is required to comply with Aetna's current plan language regard UCR determinations?

A. I'm offering an opinion as to whether or not the data is sufficient to meet those requirements. What's required legally, no. I have no opinion as to what's required legally. I'm not a lawyer.

Q. Without knowing what is required legally, how can you determine whether the data provides the

appropriate components?

A. Because that's what a statistician is. I'm telling you: I've read the language; I've laid out my report how I interpret it; operationally, what that means; and then I've told you whether or not the data that they use, in my opinion as a statistician, is sufficient to answer what I believe that does. And that's what a statistician does.

Q. So you've read the plan language as a statistician, you have interpreted what that language entails, and then you have made an assessment as to whether the database includes the components necessary to satisfy those components?

A. That's right.

Q. Directing your attention to Page 2 of your August report. And specifically the last sentence before Roman numeral II. Do you see that sentence?

A. Uh-huh.

Q. It states, "It is my opinion that the Ingenix databases suffer from fundamental flaws that make them invalid for calculating R&C benefits in compliance with plan terms."

A. Right.

Q. Do you see that?

A. Uh-huh.

Q. Now, are you offering an opinion on what Aetna is obligated to do under its plan terms?

A. I am offering a statement that if you read the plan terms and what they say they're doing, that you can't do that with this database, period. That's all I'm saying.

Q. And as to what those plan terms say, you are referring to what -- how you as a statistician interpret them?

A. That as a statistician, we often -- that's what statisticians do. We read things which say "we are going to estimate, we are going to do this," and then you determine whether or not -- what data you can get to answer that question or what data exists to answer that question, whether you can do it reliably or not; and you offer that opinion.

Q. Directing your attention to Page 1 of your August 9, 2010 report?

A. Okay.

Q. And specifically with the phrase beginning at four lines above the bottom of the page, "I appeared before the court in the McCoy matter to explain the basis for my conclusions that Ingenix data is flawed and should not be relied on for R&C benefit determinations."

probably have the effect of lowering the UCR for those people, creating -- creating an invalid and skewed number for the people that were denied billed charges.

Q. Did you testify that the database should not be relied upon for R&C benefit determinations?

A. Yes.

Q. Directing your attention to Page 6 of your August, 2010 report, Exhibit 28. And specifically the bolded statement. Do you see that?

A. Yes.

Q. That statement is "If Aetna is to determine R&C consistent with the plan definition and documents sent to its members, it must have a database that allows it to assess these core concepts and factors."

Did I read that correctly?

A. Yes.

Q. Why did you bold that statement?

A. Because that's the bottom line. That's the basic argument here. Everything else is sort of secondary, is that if you are supposed to consider similar providers, the distribution of providers who are providing a similar service -- Okay? -- you need to have data which would allow you to do that. The Ingenix data, A, does not have any information on providers, doesn't have any information on the skills

and complexities, the specialty of the provider, does not have a valid sample which allows you to make an inference about the prevailing charges in the area, even though you have no information whatsoever with respect to specific skills, specialties of the provider; those type of things which you would consider, according to the plan or at least my reading of the plan, and what they tell people they are considering, are not being considered. And that's what I told the Court.

Q. And so you bolded this statement on Page 6 of your August, 2010 report because that is the bottom line of your opinions; correct?

A. Yes.

Q. And the bottom line of your opinion is what Aetna must -- what the database that Aetna uses must include if it is to determine R&C consistent with its plan definition; correct?

A. That's correct.

Q. Let's turn to Page 6 of your August report.

And at Page 6 you refer to the initial cap term "Aetna Plan Definition Factors."

Do you see that?

A. Okay. Uh-huh.

Q. Do you see the reference to Aetna Plan

Definition Factors?

A. Yes.

Q. And this is the first time you have used this term in this litigation; correct?

A. Correct, uh-huh.

Q. And you also refer to the Aetna Plan Definition Factors as core concepts; correct?

A. Correct.

Q. And do you consider them to be one and the same?

A. Yes.

Q. And in your prior reports, you have identified generally core concepts that you thought should be taken into account in determining UCR rates; correct?

A. Correct. Some of those are a little broader than what's in here, but most I think were overlapping identically.

Q. And to the extent that they're broader, should those core concepts still be taken into account, or should the analysis now be limited to Aetna Plan Definition Factors?

A. You mean for the earlier ones? No, they should be --

Q. As you sit here today, is it your opinion

Q. Other than what, if any, facility was involved, are you offering any other opinions on what information should be included in a database?

A. No.

Q. The tenth Aetna Plan Definition Factor identified on Page 6 of your report is "the prevailing charge in other areas;" correct?

A. Correct.

Q. And you have identified that from the plan language contained on Page 4 of your report?

A. Yes.

Q. And what information do you believe that a database should include regarding the prevailing charge in other areas?

A. Well, if you can develop the prevailing charge in the area, then you have it for the other areas. But since I don't believe you can possibly develop it from this database in -- in any area, so therefore you can't have the prevailing charges in other areas.

Q. Dr. Siskin, focusing on Aetna Plan Definition Factors 6 through 10, the complexity, the degree of skill needed, the type of specialty of the provider, the range of services or supplies provided by a facility, and the prevailing charge in other areas, is

Aetna required to take each of these Aetna Plan Definition Factors into account in determining R&C for each service?

A. No, it says it may consider it. It cannot consider it. So you can't "may consider it" if you don't have information to consider. That's my opinion.

Q. And do you understand the Aetna plan language to say that Aetna may, but is not required, to consider those factors, 6 through 10?

A. Well, I understand that, but that's not the way I am applying this definition. I think this definition at the bottom is really a definition of what they mean when they say prevailing charges for similar providers. These are the type of things they need to consider to determine that.

And I say that for two reasons. One is if you look at what they say they do clearly consider, period, on the top of Page 6, these are the factors that they are talking about. But, moreover, they're saying is, when they don't have these prevailing charges -- at this point they are saying they've got these numbers in an area. If they don't have those numbers in an area, these are the type of things they are going to do to either derive it, look elsewhere to

match it. Well, if these are the factors they are going to consider, then that must be what they considered initially.

So that's why I'm saying that these factors are what they are using to define a prevailing charge for a similar service or supply.

Q. And other than your reading of the plan language on Page 4 of your report and the language in the Frequently Asked Questions on Page 6 of your August report, do you have any other basis for that opinion?

A. I think these are the key -- I think I've seen this so frequently in the different documentations and different descriptions and different plans and they consistently talk about these. I'm sure there are other examples, but I think these are the prime ones. These really highlight the issue.

Q. And let me be clear. Do you have any other basis for your opinion that the five factors set out under "Aetna may take into account factors such as" are the five factors that make up or are considered in evaluating what a prevailing charge is?

A. No. What they say -- what they are implying that they do consider. Which they say specifically on

A. Aetna refers to statistical profiles. And if was a statistician, I interpret that meaning they have statistical evidence or statistical distribution of charges of prevailing charges. And as we've discussed in depth and I think as Susan Seerill (phonetic) of Ingenix herself said, they are not statistical profiles. They are contributor distributions, they are not statistical profiles, they are not --

(A discussion is held off the record.)

A. A statistical profile -- a statistical profile is a valid statistical sample which allows you to draw inferences about a population. And Ingenix themselves say that it is not.

Q. Let's take this a step at a time.

A. But that was probably unresponsive to your question because it's not really for -- a defining of -- of -- of a prevailing charge.

Q. Well, since it wasn't responsive, let me ask the question again.

Other than the five factors set out at the bottom of the plan definition contained on Page 4 of your August report, are there any other factors that in your opinion Aetna should consider in evaluating what a prevailing charge level is?

A. No, I can't answer that question.

Q. You don't have an opinion on that?

A. What Aetna should consider? No. I'm looking at what they say they consider, and determining whether the database allows them to consider that. I'm not making a judgement as to what they should or shouldn't consider.

Q. Based on the plan language contained on Page 4 of your report, in your opinion does Aetna say that it will consider anything other than the five factors at the bottom of that definition in determining what a prevailing charge is?

A. Well, it says it's going to look at the prevailing charge for a provider for similar -- same or similar services. And I think the definition at the bottom and the top are their definition of what they would consider to do that. And the answer is: I'm not saying that's right or wrong. I'm just saying -- asking the questions as a statistician does: Will the Ingenix database allow them to do that? And the answer is no.

Q. So you as a statistician, in reading the plan language on Page 4 of your August report, conclude that Aetna has said that in evaluating what the same or similar service is should look at the complexity, the degree of skill needed, the type of the specialty

marked as Exhibit 4, and Page 15 of that report.

MR. EPSTEIN: What page?

MR. DOREN: 15, Mr. Epstein.

Q. Do you have that in front of you?

A. Yes.

Q. And in April you included in your report at Heading B on Page 15 "Aetna pre scrubs valid high charges." Correct?

A. Correct.

Q. And at Page 16 of that same report, you opined that "Aetna's use of profiling rules such as those quoted above significantly and adversely impact the integrity of the Ingenix databases;" correct?

A. Correct.

Q. And that was your view as of April of 2010?

A. Correct.

Q. And at that time, you believed that Aetna scrubbed out from its contribution data all claims above the 80th percentile of the Ingenix database; correct?

A. I assume they followed the guidelines, manual guidelines, the guidelines that I was given.

Q. Right. That was your assumption back in April?

A. My assumption.

Q. And you opine as a result of that that "This pre-editing removes valid high charges and biases downward the Upper Percentile values in the collected data;" correct?

A. Correct.

Q. And you formed that opinion based on the guidelines quoted here and deposition excerpts provided to you by counsel?

A. Correct.

Q. Now, in your August, 2010 report, Exhibit 28 at Page 21, you have changed the title of the section simply to "Aetna Profiling;" correct?

A. Correct.

Q. And did you make that change because you were no longer of the opinion that Aetna edits out charges in excess of the 80th percentile of Ingenix?

A. Well, no. Not technically. Because the data that I saw shows they still do it. But the concern that was expressed in Exhibit 4, based on the guidelines, the guidelines where they took out all charges that exceeded prevailing. Okay? And that would have had a major impact and that would have been a significant problem.

What is clear now is Aetna has profiling rules. They do profile and remove some high charges.

They do profile their data. But it's not a -- is not a fixed rule that they eliminate all the high charges what exceeded the prevailing rate.

Q. And you understand now that Aetna has no such rule in place; correct?

A. I'm not sure they don't have such a rule in place.

MR. EPSTEIN: Object.

A. They don't apply it. That's clear.

Because these were -- these were rules that were supplied. So these were -- and the data at this point in time, these were the rules. What was clear is that it was not applied, even then. I mean, it was not applied.

Q. When you say "even then," what are you referring to?

A. I mean, the study that I saw looked at the data at the point that these rules were published. So it's not that they stopped doing it. I'm not saying that.

Q. You are saying while this rule may have been in writing within the company, it hasn't been applied?

A. Correct. It was not applied. That appears to be the evidence.

Q. And when you say that you have seen data that

shows they still scrub out some high charges, are you referring to Dr. Joskow's report?

A. Yes.

Q. Are you referring to anything else?

A. No.

Q. And are you aware of any profiling rule in place at Aetna that is intended to scrub out high charges?

A. Well, this was the only rule that I saw. And these rules aren't being applied.

So I -- they're -- they're profiling their data. Okay? It's not clear to me what rules they're using to profile their data. It is clear that they are not using a rule which just automatically eliminates all charges above prevailing.

Q. As you sit here today, do you know what profiling rules Aetna currently has in place?

A. No.

Q. You just know one rule they don't have in place; right?

A. Correct. As I pointed out here, I think I'm still waiting to get all the information on that. I have not gotten information on the profiling procedures.

Q. And if I could direct your attention -- I'm

sorry. Are you done?

A. Yes.

Q. If I could direct your attention back to Page 21 of your report, three lines down, you have changed the statement from April to "First, such pre-editing removes valid high charges and biases downward the percentile values in the collective data" in April to the August report which says, "First, such pre-editing may remove valid charges and biases the percentile values in the collected data."

Did I read those two statements correctly?

A. Correct.

Q. And did you make that change after learning that Aetna does not, in fact, pre scrub all valid charges above the 80th percentile?

A. Correct.

Q. And when you say "such pre-editing may remove valid charges," why did you make that change?

A. Well, I'm not quite sure. I know that they edit out charges in particular -- some high charges. Dr. Jaskow had no idea what the rules were. At this point, I don't know what the rules were. So I don't know whether they were -- why they were removed. So I can't say whether it was valid or not valid.

Q. And you go on to say, "And biases the

percentile values in the collected data." That "It may remove valid charges and biases the percentile values in the collected data."

Did I read that correctly?

A. Correct.

Q. So as of August, your opinion is that pre-editing by Aetna may remove valid charges; correct?

A. Correct, they do pre-editing. I don't know what basis it is. And if it's -- it was purely statistical loading, then it may, in fact, really remove valid high charges. If it's -- for other reasons, it may not.

Q. And, again, in using the term "biases" without saying "biases downward," what do you mean?

A. Well, two things. One is: Pre-screening the data creates if it's removing valid charges, it creates a database which is going to Ingenix which is incorrect. Secondly, if it's pre-screening the data on any statistical basis, it's incorrect. Ingenix specifically requires that they do not be prescreened because it takes the data under a statistical assumption that it's not pre screened. So it's double screening if it's pre screened already.

Q. And your opinion today in terms of any pre-screening and the bias it may cause, you don't

know if that bias is to increase or decrease any specific percentile; correct?

A. I don't know if this is -- I put my last sentence in this Page 22, top of Part E, I don't really know right now exactly what Aetna is doing, so I have no comments.

Q. No opinions?

A. No opinion as to whether it's appropriate, inappropriate; what its effect is or isn't or what it could be. I really know what they are doing right now.

Q. In directing your attention to the bottom of Page 21 and carrying over to the top of Page 22, you state that "In my prior report, I analyzed Aetna's profiling rules based on Aetna's documents;" correct?

A. Correct.

Q. And you also analyzed some deposition testimony provided by counsel; correct?

A. Correct.

Q. "And I have subsequently learned that Aetna did not follow these rules as written in total."

Did I read that accurately?

A. That's correct.

Q. Is that an accurate statement?

A. That's correct.

Q. "I am advised that discovery is being conducted to determine the extent, if any, to which Aetna removed charges automatically that exceeded the R&C applicable to such claim."

Did I read that correctly?

A. That's correct.

Q. Have you been informed of the results of any of that discovery?

A. No, the only thing I saw in that was a -- from Dr. Joskow's deposition that he didn't know what the rules were. And that was -- I think that's all I've seen so far.

Q. And was that his deposition from last spring?

A. I don't recall. Sitting here today, I don't remember which deposition it was.

Q. Was it a deposition within the last week?

A. No, it wouldn't have been within the last week.

Q. Have you seen anything else on this topic?

A. No.

Q. In 2008, you testified to Judge Hochberg that Aetna witnesses had testified in depositions that Aetna had automatically removed all claims above the prevailing rates; correct?

MR. EPSTEIN: You asked these questions at the

last deposition. If you want to go over all of those questions, I understood from other depositions that were taken --

MR. DOREN: This is foundational, Barry.

MR. EPSTEIN: I don't understand this foundational. You don't have to go over it. Ask him a question that's new, but don't go over the last deposition.

MR. DOREN: Fair enough. I think I can do it without that question.

MR. EPSTEIN: Good.

Q. When we spoke in April --

MR. DOREN: Or strike that.

Q. When we spoke in May, May 13, I believe, and I showed you deposition excerpts from Ms. Joskow and Ms. Schilcott (phonetic), you stated that you would need to go back and read everything to determine the basis for your statements to the Court. Do you recall that?

A. Correct.

Q. All right. Have you gone back and reviewed Ms. Joskow's deposition testimony?

A. No.

Q. Have you reviewed Ms. Schilcot's deposition testimony?

A. No.
Q. Have you reviewed anything else --
A. Wait. I've reviewed the -- the more -- when I reviewed -- Dr. Joskow's stated his results on this.
Q. Have you reviewed -- I just want to ask you again, because you said "wait."
Have you reviewed Ms. Schillcot's deposition any further after your May 13 deposition?
A. No, no, I don't think so.
Q. Do you have any plans to do so?
A. No, I don't see any need to.
Q. Now, in April I also showed you the report of the Rockefeller Subcommittee; correct?
A. Correct.
Q. And do you recall that your report was cited in that report?
MR. EPSTEIN: I think we are asking the same questions. If you'd like to reprise that deposition, just give it to him.
Q. Do you recall?
A. Vaguely, yes.
Q. Have you taken any steps with the Rockefeller Committee to clarify the record in the way they used your report?
A. No.

Q. Do you have any plans to?

A. I never thought of that. I mean Rockefeller ever actually contacted me to discuss that initially. But if somebody wants me to do it, I have no problem. I mean it's clear that it's -- that statement was in error. It was based on the documentation that I was given about what the rules were, but I did not know they didn't follow it.

Q. And is it because you determined that those statements were in error that you see no need to go back and review Ms. Schillcot's or Ms. Joskow's deposition?

A. The bottom of the question, is it withdrawn. Is the statement, is it correct or incorrect? The statement was incorrect.

Q. Let's look at Pages 41 to 43 of your August report.

Do Pages 41 to 43 of your August, 2010 report set forth all opinions that you're offering in this litigation regarding Aetna's use of a percentage of Medicare to pay nonparticipating providers?

A. Yes.

Q. And is the basis for each of those opinions also contained on these pages?

A. Yes.

Q. Now, you cite repeatedly in these pages to the Traceski deposition; correct?

A. Correct.

Q. Were you provided excerpts of that deposition?

A. No, I was given the whole deposition.

Q. And did you review the entire deposition?

A. I skimmed the whole deposition. Meaning my basic issue is that -- is that the Medicare methodology that was used was not intended to be a prevailing rate in the community. And -- and didn't meet UCR definitions. And it was clear in -- his deposition, I think I also read another deposition where that was discussed. It's in documents which basically said the same thing.

Q. Do you know what those documents were?

A. I don't know whether -- at this point whether new documents were sent to me or old documents, but it wouldn't alter my conclusion here, which is the very same conclusion that the 125 percent price was not intended and does not meet the constraints necessary to assume a prevailing rate.

Q. And, again, in the context of Medicare, one point -- or a percentage of Medicare, you are referring to the prevailing --

Q. And you have also noted that perhaps the significant differences in the medical market area of Page 11 would be an additional element to be taken into account in formulating prevailing charge; correct?

A. Perhaps, yes.

Q. With those ten Aetna Plan Definition Factors and the possibility of significant differences in medical market area as defined on Page 11 of your report, are those all the factors that in your opinion should be taken into account in determining a prevailing charge?

A. Again, I just want to be clear.

They are the only factors that I saw that Aetna says they -- they would consider. They consider -- I'm making no judgement -- I'm not making a judgement as to what should or shouldn't be considered. I'm just saying: I read the plans; this is what they say they are going to consider; do they have the data to do that.

Q. Do you currently intend to identify any factors beyond those that we've discussed today and that are identified on Page 6 of your report?

A. Not unless, and I don't expect this to happen, somebody shows me a plan that has an

additional factor that wasn't discussed here. But I don't expect that to occur.

Q. And in that circumstance, would your analysis be specific to that additional plan as opposed to the language that you've identified on Page 4 of your report?

A. Well, that addition would obviously only be specific to that plan, but I don't expect it to exist.

Q. And are you offering an expert opinion in this matter that the five factors identified at the end of the Aetna plan language on Page 4 of your report must be considered in determining what a prevailing charge is?

MR. EPSTEIN: Objection. Asked and answered and mischaracterizes testimony.

A. I don't like the word "must." I'm saying given what's on Six, given what I've read, given how I read this in plain language, this says that would be what you would consider to determine prevailing charges. That's what's being considered. To determine, A, similarly -- providers providing similar services; that's how it's defined.

Q. And that's an expert opinion that you are offering in this litigation?

A. That they would consider -- correct, as a

statistician that's what I would interpret you need to be able to consider to assess this.

Q. Looking at the plan language on Page 4?

A. The plan language on Page 4; what they tell the -- tell the subscribers; and, as I explained why, even -- even just the plain language, four, if I was reading this as a statistician, that prevailing language of similar -- similar providers, usual charge for -- for the similar or same service has to be operational.

Otherwise, I think it's clear that the factors that one says one has to consider to do that is defined here in Four, as well as specifically stated in what they -- in what they tell the subscribers.

Q. And again when you say "Four," you are referring to Page 4?

A. Correct.

Q. Are your opinions regarding the impropriety of Aetna's use of a percentage of Medicare as a reimbursement methodology based on the assumption that those payments are being made under plan language similar to that on Page 4 of your August report?

A. Yes.

Q. And are your opinions regarding the